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KENT COUNTY COUNCIL.

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Annual Report

OF THE  
MEDICAL OFFICER OF HEALTH

For the Year 1916,

BY

ALFRED GREENWOOD, M.D., B.Sc., D.P.H.,

BARRISTER-AT-LAW,

*County Medical Officer of Health.*

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Maidstone :

W. P. DICKINSON, POST OFFICE PRINTING WORKS, HIGH STREET.

1917.



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DEPARTMENT OF THE COUNTY MEDICAL OFFICER,  
SESSIONS HOUSE,  
MAIDSTONE,  
*September 3rd, 1917.*

To the Chairman and Members of the Kent County Council.

MY LORDS AND GENTLEMEN,

In accordance with General Order No. 55,475 of the Local Government Board, I beg to submit herewith my fifth Annual Report on the Public Health and Sanitary Condition of the County of Kent for the year ended December 31st, 1916.

Every attempt has been made to curtail this report as much as possible. The various tables are kept in type by the printer from year to year.

During the war the annual health reports have proved to be of great use to various military authorities in the county in considering the disposition of troops therein.

I have to express my appreciation and thanks to the district medical officers of health who have invariably given me every possible assistance in the execution of my duties.

Finally, I should like to state that all the members of my staff—both permanent and temporary—have again worked unstintingly during the year, and have carried out their duties in a highly creditable manner, under very difficult conditions.

I am, my Lords and Gentlemen,

Yours obediently,

ALFRED GREENWOOD.

# KENT COUNTY COUNCIL.

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## PUBLIC HEALTH COMMITTEE.

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This Committee reports to the County Council on all matters concerning the Public Health, and the administration of the Midwives Act. Its constitution for 1917 is as follows :—

ALEXANDER, S.R., M.D.

AMES, W.

BARKER, W. COBBETT

BILLINGHURST, E. A.

CHILD, COLES

COLLET, SIR MARK E., BART.

CORNWALLIS, COL. F. S. W.  
(Chairman of the County Council)

CRUNDALL, E. R.

DARNLEY, THE RIGHT HON. THE EARL  
OF (Chairman of the Committee)

FLINT, ARTHUR, M.D.

GOWER, R. VAUGHAN

GUILFORD, THE RIGHT HON. THE  
EARL OF

HARDY, RIGHT HON. LAURENCE, M.P.  
(Vice Chairman of the Committee)

HARRIS, THE RIGHT HON. LORD,  
G.C.S.I., G C.I.E.

HARRISON, W. J.

HARSTON, C.

HUSSEY, E. W.

(Vice-Chairman of the County  
Council and Chairman of the  
Finance Committee)

IGGLESDEN, C.

LAWRENCE, G.

LEES, A. J.

MARSHAM, GEORGE

MAY, T.

MUMFORD, C. E.

NICHOLSON, H.

PASSBY, COL. R. J.

PAYNE, F. WALTER

RADCLIFFE, W.

SACKVILLE, THE RIGHT HON. LORD  
SHEA, S.

SMITH, S. LEE

TOWER, J.

VINSON, A.

WATSON, C. H.

WHYMAN, H. F.

WILFORD, JOSHUA



# LOCAL AUTHORITIES.

## URBAN.

5

District and Borough Councils.	Clerks.	Medical Officers of Health.	Date of Receipt of Annual Summary.	
Ashford .. ..	J. Creery ..	A. M. Watts, M.D., D.P.H. ..	October	13th†
Beckenham .. ..	F. Stevens..	*J. M. Clements, M.D., D.P.H. ..	July	20th†
Bexley .. ..	T. G. Baynes ..	O. Sunderland, M.R.C.S., L.R.C.P. ..	July	26th
Broadstairs and St. Peter's	L. A. Skinner ..	*D. MacDougall, M.D., D.P.H. (Acting)..	August	7th
Bromley Borough ..	F. H. Norman ..	A. F. G. Codd, M.B., F.R.C.S. ..	August	4th
Chatham Borough ..	J. W. Halloran ..	*J. Holroyde, F.R.C.S.E., D.P.H. ..	July	13th
Cheriton .. ..	A. Atkinson ..	A. J. Gore, M.R.C.S., L.R.C.P. (Acting) ..	July	16th
Chislehurst .. ..	J. J. Brown ..	*J. S. Tew, M.D., D.P.H. ..	August	4th†
Dartford .. ..	W. Kay ..	J. Hamilton, L.R.C.P., L.R.C.S.--Eng., D.P.H.	July	20th
Deal Borough .. ..	A. C. Brown ..	A. Mason, M.R.C.S., L.R.C.P. ..	August	10th
Dover Borough .. ..	R. E. Knocker ..	*D. MacDougall, M.D., D.P.H. (Acting) ..	August	9th
Erith .. ..	J. Atkinson ..	*A. E. Jerman, M.B. ..	July	12th
Faversham Borough ..	Guy Tassell ..	C. J. Evers, M.D. ..	July	9th
Folkestone Borough ..	A. F. Kidson ..	M. G. Yunge Bateman, M.R.C.S., D.P.H..	July	20th†
Footscray .. ..	A. E. Leonard ..	*J. S. Tew, M.D., D.P.H. ..	August	4th
Gillingham Borough ..	F. C. Boucher ..	*E. C. Warren, L.R.C.P., L.S.A. ..	July	14th
Gravesend Borough ..	H. H. Brown ..	*C. D. Outred, M.R.C.S., L.R.C.P., D.P.H. ..	August	1st†
Herne Bay .. ..	G. H. Beetenson ..	*D. MacDougall, M.D., D.P.H. (Acting) ..	August	7th
Hythe Borough .. ..	B. C. Drake ..	*D. MacDougall, M.D., D.P.H. (Acting) ..	August	4th
Lydd Borough .. ..	G. G. H. Witchell ..	M. B. S. Button, F.R.C.S., L.R.C.P. ..	September	4th
Maidstone Borough ..	S. Lance Monckton	C. Pye Oliver, M.D., D.P.H., etc. ..	July	20th
Margate Borough .. ..	E. Brooke ..	*R. McCombe, F.R.C.S., L.R.C.P., D.P.H. ..	July	11th
Milton Regis .. ..	J. Dixon, jun. ..	*T. B. Heggs, M.D., D.P.H. ..	August	12th†
New Romney Borough ..	W. Lamacraft ..	H. Hick, M.R.C.S., L.R.C.P. ..	July	20th
Northfleet .. ..	C. E. Hatten ..	H. T. Sells, M.R.C.S., L.R.C.P. ..	July	14th
Penge .. ..	A. E. Eves ..	R. Wilkinson, M.D. Brux. ..	August	12th†
Queenborough Borough..	C. B. Harris ..	*T. B. Heggs, M.D., D.P.H. ..	September	11th
Ramsgate Borough ..	A. Blasdale Clarke	*J. Dundas, M.D., D.P.H., D.T.M. ..	July	21st
Rochester City .. ..	A. Kennette ..	*S. J. Pritchett, M.R.C.S., D.P.H. ..	July	6th†
Sandgate .. ..	J. Shera Atkinson ..	C. E. Perry, M.D. ..	July	17th
Sandwich Borough ..	E. C. Byrne ..	J. W. Harrison, M.B., C.M. ..	July	15th
Sevenoaks.. ..	F. W. Tipton ..	*J. S. Tew, M.D., D.P.H. ..	August	4th†
Sheerness .. ..	V. H. Stallon ..	*T. B. Heggs, M.D., D.P.H. ..	August	16th
Sittingbourne .. ..	C. B. Harris ..	*T. B. Heggs, M.D., D.P.H. ..	July	26th
Southborough .. ..	P. Hanmer ..	*J. S. Tew, M.D., D.P.H. ..	August	4th†
Tenterden Borough ..	H. B. Mace ..	*J. S. Tew, M.D., D.P.H. ..	August	4th
Tonbridge.. ..	H. W. Peach ..	*J. S. Tew, M.D., D.P.H. ..	August	4th†
Tunbridge Wells Borough	W. C. Cripps ..	*F. C. Linton, M.B., D.P.H. ..	July	19th†
Walmer .. ..	F. W. Hardman ..	E. L. Davey, M.R.C.S., L.R.C.P. ..	July	30th
Whitstable .. ..	J. F. Whichcord ..	F. P. Piper, M.B., M.R.C.S., L.R.C.P. ..	October	21st†
Wrotham.. ..	H. E. Pyle..	A. A. Lipscomb, M.R.C.S., L.S.A. ..	July	19th

## RURAL.

Ashford, East .. ..	J. Kingsford ..	*D. MacDougall, M.D., D.P.H. (Acting) ..	August	7th
Ashford, West .. ..	J. M. Poncia ..	*D. MacDougall, M.D., D.P.H. (Acting) ..	August	7th
Blean .. ..	W. T. Brooks ..	*D. MacDougall, M.D., D.P.H. (Acting) ..	August	7th
Bridge .. ..	T. L. Collard ..	*D. MacDougall, M.D., D.P.H. (Acting) ..	August	7th
Bromley .. ..	E. Haslehurst ..	*J. S. Tew, M.D., D.P.H. ..	August	4th
Cranbrook .. ..	S. F. Williams (Acting)	*J. S. Tew, M.D., D.P.H. ..	August	28th
Dartford .. ..	E. J. Hobbs ..	*S. Richmond, M.D. ..	September	11th†
Dover .. ..	E. Carder (Acting)	*D. MacDougall, M.D., D.P.H. (Acting) ..	August	7th
Eastry .. ..	F. S. Cloke ..	*D. MacDougall, M.D., D.P.H. (Acting) ..	August	7th
Elham .. ..	B. C. Drake ..	*D. MacDougall, M.D., D.P.H. (Acting) ..	August	7th
Faversham .. ..	Guy Tassell ..	P. G. Selby, M.R.C.S., L.R.C.P. ..	September	11th
Hollingbourn .. ..	H. J. Bracher ..	G. M. Tuke, M.R.C.S. ..	July	14th
Hoo .. ..	R. P. Smyth ..	*C. D. Outred, M.R.C.S., L.R.C.P., D.P.H. ..	September	5th
Maidstone.. ..	R. Hoar ..	*J. S. Tew, M.D., D.P.H. ..	August	4th†
Malling .. ..	F. J. Allison ..	A. H. Roberts, M.R.C.S., L.R.C.P. ..	July	26th
Milton .. ..	E. C. Harris ..	*T. B. Heggs, M.D., D.P.H. ..	September	11th
Romney Marsh .. ..	W. Lamacraft ..	H. Hick, M.R.C.S., L.R.C.P. ..	July	20th
Sevenoaks.. ..	F. H. Vibert ..	*J. S. Tew, M.D., D.P.H. ..	August	4th†
Sheppey .. ..	H. T. Copland ..	T. R. Wiglesworth, M.D. ..	July	19th
Strood .. ..	J. E. Povey ..	C. Flood, L.R.C.S., L.A.H. ..	July	13th†
Tenterden.. ..	H. B. Mace (Acting)	*J. S. Tew, M.D., D.P.H. ..	August	4th
Thanet .. ..	C. Taylor ..	*D. MacDougall, M.D., D.P.H. (Acting) ...	August	7th
Tonbridge.. ..	N. R. Stone ..	*J. S. Tew, M.D., D.P.H. ..	August	4th†

\*These Medical Officers devote their whole time to Public Health work.

For information as to medical officers of health on military service, and temporary appointments in consequence thereof, see page 7.

† Each medical officer of health has supplied information in reply to a summary of questions addressed from the county health department, on which this report is mainly based. The annual report has also been used where available. Those districts where the report had not been received on November 1st are indicated †

## DUTIES OF THE COUNTY MEDICAL OFFICER WITH RESPECT TO THE PREPARATION OF AN ANNUAL REPORT

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These duties are set out in Articles 7 and 8 of the General Order of the Local Government Board dated July 29th, 1910, and are as follows:—

“(7.) The Medical Officer of Health of the County shall as soon as practicable after the 31st day of December in each year make an Annual Report to the County Council up to the end of December on the sanitary circumstances, the sanitary administration and the vital statistics of the County.

“In addition to any other matters upon which the Medical Officer of Health may consider it desirable to report, his Annual Report shall contain the following sections:—

“(a) A digest of all annual and special reports made by the Medical Officers of Health of all County districts within the County ;

“(b) a section as to the isolation hospital accommodation available for each County district and as to the steps which should be taken to remedy any deficiencies which may exist ;

“(c) a section on the administration of the Housing of the Working Classes Acts, 1890 to 1909, within the County ;

“(d) a section on the water supply of the several County districts within the County ;

“(e) a section on the pollution of streams within the County and as to the steps for the prevention of pollution taken :—

- (i.) by the local authorities, and
- (ii.) by the County Council ;

“(f) a section on the administration within the County of the Midwives Act, 1902 ; and

“(g) a section on the administration of the Sale of Food and Drugs Acts, 1875 to 1907, within that part of the County in which the County Council have jurisdiction for the purposes of those Acts.

“(8.) The Medical Officer of Health of the County shall send to Us two copies of his Annual Report and two copies of any Special Report ; he shall also send one copy of his Annual Report to the Council of every County district in the County and shall send three copies of any Special Report to the Council of every such County district affected by the Special Report.”



# ANNUAL REPORT.

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## ADMINISTRATION.

During the war the following officials have been called up for military duty, and temporary appointments have been made as stated :—

District.	Medical Officer of Health.		Temporary substitute during period of War.	
Ashford ... ..	Dr. A. M. Watts	...	Dr. C. M. Vernon	
Beckenham ... ..	„ J. M. Clements	...	„ H. B. Bolus	
Dartford ... ..	„ J. Hamilton	...	„ T. Farthing	
Deal... ..	„ A. Mason	...	„ J. Wood	
Erith... ..	„ A. E. Jerman	...	„ L. J. J. Barnes	
Maidstone ... ..	„ C. Pye Oliver	...	„ J. E. C. Allott	
North-East Kent...	„ T. B. Heggs	...	„ H. C. Mends Gibson	
United District				
Ramsgate ... ..	„ J. Dundas	...	„ T. G. Styan	
Sandwich ... ..	„ J. W. Harrisson	...	„ H. Kerswill	
Tunbridge Wells ...	„ F. C. Linton	...	„ W. Stamford	
Walmer ... ..	„ E. L. Davey	...	„ J. Wood	

Dr. Linton terminated his civil duties to take up military service in November, 1916, although prior to this date he had combined military with his public health work. Dr. Mason terminated his civil duties in May, 1917, and the other officers mentioned were on military service prior to 1916.

Dr. Grace H. G. Dundas terminated her appointment as deputy medical officer to Dr. J. Dundas, of Ramsgate, in February, 1917, since which date Dr. Styan has undertaken the duties.

Since April, 1916, Dr. Scott, deputy to Dr. Heggs for the North-East Kent United District, has been undertaking special work for the Local Govern-

ment Board and Dr. Mends Gibson has acted for him in the public health work.

In addition to the above, Dr. J. Holroyde, of Chatham, Dr. S. J. Pritchett, of Rochester, Dr. E. C. Warren, of Gillingham, Dr. C. D. Outred, of Gravesend, Dr. J. S. Tew, of Tonbridge (West Kent Combined District), Dr. P. G. Selby, of Faversham Rural, and Dr. T. R. Wigglesworth, of Sheppey, have likewise undertaken military service although continuing their civil duties at the same time. Of these officers the five first-named have, I understand, resigned their military appointments.

I regret to report the death, on May 24th, 1917, of Dr. A. F. G. Codd, Medical Officer of Health for the Borough of Bromley. Dr. J. Mathewson has been appointed temporary Medical Officer of Health in his stead.

Dr. H. S. Oliver, of Lydd, died on November 7th, 1915, and I stated in my last report that no successor had been appointed up to the middle of 1916. Dr. M. B. S. Button, of Rye, has since been appointed to that position.

Dr. M. K. Robinson, of Dover, died on March 31st, 1916, and Dr. D. MacDougall has been appointed Medical Officer of Health of the East Kent Combined District until the end of the war. In addition, Dr. A. J. Gore has been appointed similarly for the Urban District of Cheriton. I beg to repeat the suggestion contained in my report for 1915, that after the war there should be three whole-time medical officers of health working in this area as follows :—

No. 1. District.	No. 2 District.	No. 3 District.
West Ashford Rural	Blean Rural	Dover Borough
East Ashford Rural	Bridge Rural	Dover Rural
Elham Rural	Thanet Rural	
Hythe Borough	Eastry Rural	
Cheriton Urban	Herne Bay Urban	
	Broadstairs Urban	

#### LOCAL GOVERNMENT BOARD INQUIRIES.

Inquiries have been held by the Local Government Board in only two instances during the year. Both related to the Rochester and Chatham joint sewerage scheme, the 1st on July 12th, 1916, having reference to the payment of fees for work done under contract, and the second, on November 7th, 1916, was an inquiry into the details of the scheme. There was no opposition.

## OFFICIAL CIRCULARS, &c., RESPECTING PUBLIC HEALTH MATTERS.

*Commissions for eligible Medical Men.*—Circular of the Local Government Board addressed to local authorities concerning the release for military or naval service of all doctors, aged forty-five or under, engaged in public health work, who could be spared from civil employment without serious injury to the civil population.

The Central Medical War Committee, formed to facilitate the carrying out of this object, asked to be informed of doctors (*a*) who could be spared almost at once, (*b*) who might be spared later, and (*c*) who could not be spared.

The Authorities, in considering the matter, were told to bear in mind the special importance of maintaining the public health at the present time, but subject to this they should be prepared to allow medical men of military age who were in their service at the time to join the Forces.

By arrangement with the War Office, applications for commissions from medical officers of public health authorities were referred to the Board for their concurrence or otherwise, and in view of this arrangement the Board thought that all such medical officers might properly enrol themselves under the scheme of the Central Medical War Committee.

February 18th, 1916.

*Public Health (Tuberculosis) Regulations, 1916.*—Order of the Local Government Board altering the Tuberculosis Regulations, 1912, so as to require medical officers of health to furnish to the Army Council particulars of all male persons between the ages of *eighteen* and *forty-five* (on January 1st, 1916), who had been notified since 1st February, 1913, as suffering from tuberculosis. In addition, particulars of all male patients notified from date, between the ages of *sixteen* and *forty-five*, are to be sent to the Army Council within a week after the case has been entered in the tuberculosis register.

All information received in pursuance of these Regulations is to be regarded as confidential by every person who has access thereto.

A circular which accompanied the order states that the object thereof is to assist the Army Council in securing that men suffering from tuberculosis are not enlisted into the army.

May 13th, 1916.

*Tuberculosis.*—Circular of the Local Government Board addressed to the Councils of Counties and County Boroughs relative to the question of aiding the Army Council to ensure that men suffering from tuberculosis should not



be admitted into the army. The said councils were urged to allow their tuberculosis officer or officers to assist the military authorities in the examination of recruits and in such other ways as might be desired.

May 9th, 1916.

*Sanitary Conveniences in Shops.*—Circular of the Local Government Board pointing out the difficulty arising in the case of small shops in releasing men for service in the army and replacing them by women, by reason of the provisions of the Public Health Act requiring separate sanitary accommodation for each sex. In many cases where female labour has not been previously employed and cannot be entirely substituted for male labour, there is not available such separate accommodation, and it would be a hardship on the employer if he were called upon to incur special expense by way of structural alterations to meet conditions which are only intended to be temporary.

The Local Government Board suggest that councils should instruct their officers to ascertain whether temporary arrangements cannot be made to meet the difficulty, such as the use, free of charge, of a convenience in a neighbouring house, or of a public convenience near by; and to administer the provisions of the Act so far as it lies with them, with the view of facilitating the action of any shop-keeper who is willing to allow his male assistants to join the army.

June 14th, 1915.

*Public Health (Venereal Diseases) Regulations, 1916.*—Regulations of the Local Government Board made under the Public Health Act, 1875, as amended by the Public Health Act, 1896, respecting the prevention and treatment of venereal diseases. By these regulations it is made compulsory for the council of every county and county borough to prepare and submit to the Local Government Board, and, after approval, to carry into effect, a scheme (a) for the treatment at, and in, hospitals, or other institutions, of persons suffering from venereal disease, and (b) for supplying medical practitioners with salvarsan or its substitutes. Councils are also required to make arrangements for enabling medical practitioners practising in their administrative area to obtain a scientific report on any material which the practitioner may submit from a patient suspected to be suffering from a venereal disease.

Any council may make such provision under the order for the giving of instructional lectures, and for publishing information on questions relating to venereal disease, as they may think necessary or desirable.



All information relating to persons treated under this scheme is to be regarded as confidential.

(The facilities for treatment, as above, under approved schemes, are free of cost to patients, the cost being met by the councils concerned, which, in turn, receive from the Local Government Board 75 % of the expenditure incurred).

July 12th, 1916.

*Prevention and Treatment of Venereal Diseases.*—Circular letter of the Local Government Board accompanying the above regulations. The circular draws attention to the Report of the Royal Commission on Venereal Diseases, on the recommendations of which the regulations have been made.

Section 2 of the Public Health (Prevention and Treatment of Disease) Act, 1913, provides that *except in case of emergency*, the Local Government Board shall not require a county council to execute and enforce regulations made under Section 130 of the Public Health Act, 1875, without the consent of the council, but having regard to the findings of the Royal Commission, the Board arrived at the conclusion that the conditions of the present war constitute a case of emergency within the meaning of the Act.

The circular deals with the steps to be taken by councils, under the following headings :—

Provision of laboratory facilities for diagnosis and for guidance in treatment.

Provision of facilities for treatment.

Approval of institutions.

Relation of general practitioners to the schemes of local authorities.

Finance.

July 13th, 1916.

*The Organisation of Medical Measures against Venereal Diseases.*—Memorandum by the Medical Officer of the Local Government Board making suggestions as to the organisation of schemes for the control of venereal diseases, under the conditions stated in the Board's circular letter and regulations.

The question is dealt with under the headings :—

(A) TREATMENT CENTRE OR CLINICS.

General.

Out-patient work at the Clinic.

Hospital beds.

Arrangements between Hospital Committee and Local Authority.  
Medical Officer of the Clinic.

Relation of the General Practitioner to the official scheme.

The work of the Medical Officer of Health of a County or County Borough in relation to the scheme.

The work of other Medical Officers of Health in relation to the scheme.

(B) ADMINISTRATION OF SALVARSAN OR ITS SUBSTITUTES.

(C) PROVISION OF LABORATORY FACILITIES FOR AID IN DIAGNOSIS AND TREATMENT.

Nature of examinations required.

The Local Authority in relation to the provision of laboratory facilities.

The Clinic in relation to laboratory work.

The Pathologist.

Payment to Pathologists.

Relation of Pathologist to Practitioner.

The collection and transmission of specimens.

Particulars required with each specimen sent to laboratory.

Form of Pathologist's report to Medical Practitioner.

Apparatus for collection of specimens.

Instructions for collecting specimens.

July, 1916.

(Full particulars of the Kent County Council's scheme under these Regulations are set out on pages 52, 53 and 54 of this report).

*Prevention and Treatment of Venereal Diseases.*—Circulars of the Local Government Board were also addressed to general hospitals and Boards of Guardians in relation to this question.

The circular to hospitals emphasises the importance of immediate action being taken to extend the existing facilities for treatment of venereal diseases, and asks for the active co-operation of the general hospitals of the country, without which the measures recommended by the Royal Commission cannot be successful. It is recognised that difficulties may arise in some hospitals, owing to shortage of medical staff, but wherever possible the Army Council will make arrangements whereby those officers of the Royal Army Medical Corps, whose services would be of special value for this work, would be enabled to devote part of their time to it. Attention is also drawn to the

fact that although hospitals undertaking the work will be visited at intervals by medical inspectors of the Local Government Board, no interference with the administration of the hospitals is contemplated ; and that the whole of the extra expenditure incurred in providing the required facilities will, if the governing body so desire, be defrayed out of public funds. Appended to the circular are copies of the regulations, the circular to councils and the memorandum of the Medical Officer of the Board, outlined above.

The circular to Boards of Guardians mentions that the laboratory facilities which are to be provided for the diagnosis of venereal diseases are to be available for medical officers of Poor Law institutions, and also that these medical officers are to be provided with salvarsan, or its substitutes, on the same conditions as those on which the drugs are supplied for other medical practitioners. With a view to encouraging still further the use of the best modern methods of treating venereal diseases in Poor Law institutions, the Local Government Board are, in addition, prepared to entertain applications for grants in respect of special expenditure incurred by Boards of Guardians.

July 13th, 1916.

*Prevention and Treatment of Venereal Disease.*—Circular of the Local Government Board, following the reception by the Board of a deputation from the British Medical Association. The deputation suggested, and the Board agreed, that it would be a great advantage if committees of local authorities, to whom the preparation of a scheme was delegated, were to invite the local medical profession to nominate two representatives (one to represent the medical staffs of hospitals and the other the general practitioners in the area) to attend all committee and sub-committee meetings at which the proposed scheme may be discussed, and to assist the committee with their special knowledge of the needs of the particular area.

The circular, whilst not laying down any hard and fast lines with regard to the distribution of salvarsan substitutes, suggests that they should be supplied free, by the medical officer of health, or someone acting as his agent, to all registered medical practitioners who can produce satisfactory evidence of training or experience in the administration of these drugs.

August 29th, 1916.

*Domiciliary Treatment of Tuberculosis.*—Order of the Local Government Board rescinding the Domiciliary Treatment Order of 1912, and laying down new regulations for such treatment. The Order abolishes the requirement to keep the continuous record of patients on the previously prescribed form, and a form of report has been drawn up to take its place. This form is to be filled



in and transmitted by the doctor, to the tuberculosis officer, not less often than once in every three months.

Under this Order, medical practitioners undertaking the domiciliary treatment of patients under sanatorium benefit, are subjected to certain conditions in the matter of attendance on patients, and in addition to transmitting a quarterly report as above, they are required to confer with the tuberculosis officer regarding the patients under their care, and to make arrangements with this officer for each patient to be examined by him (the tuberculosis officer) not less often than once in twelve months. Any circumstances affecting adversely the sanitary conditions under which the patient is living are to be reported by the doctor to the district medical officer of health concerned.

This Order came into operation on January 1st, 1917, and was accompanied by an explanatory circular.

September 19th, 1916.

*Maternity and Child Welfare.—Regulations under which Grants will be paid by the Local Government Board.*—These Regulations set out the services under which the Board's grants of 50 % of the approved expenditure are to be paid to councils by the Local Government Board during each financial year, commencing April 1st. The services include the salaries and expenses of inspectors of midwives and health visitors, the provision of a midwife for necessitous women and for areas insufficiently supplied with midwives, the provision of a doctor in necessitous confinement cases, the expenses of a centre, and hospital treatment in complicated confinements.

Grants are also paid to voluntary agencies in cases where the work is co-ordinated, as far as possible, with the public health work of the local authority and the school medical service of the local education authority.

A circular letter amplifying the regulations, and laying stress on the importance of public authorities securing full provision for maternity and child welfare in their districts, in spite of the need for economy in other directions, accompanied the regulations.

September 23rd, 1916.

*Health Visiting and Maternity and Child Welfare Centres*—Memorandum by the Medical Officer of the Local Government Board containing details of a complete scheme of measures for maintaining and improving the health of mothers and of their children. The memorandum states that this work can only be undertaken on an adequate scale when the information supplied to the local authority by the notification of births is fully utilised. By this means, early visits can be made to every household in which a birth has occurred, and where a visit is considered desirable. At these visits



suitable advice is given by the health visitor, and when there is a centre in the district the mother is recommended to bring her child to such centre. The health visitor also attends the centre, hears the advice given by the doctor to the mothers and subsequently re-visits the homes, thus ensuring that the medical instructions are being carried out in the home.

The memorandum deals fully with the question under the following headings :—

- Qualifications of the Health Visitor.
- Number of visits.
- The work of the Centre.
- Accommodation at and equipment of the Centre.
- Keeping of records.
- The staff of the Centre.
- Cost of the Centre.
- Ante-natal work.
- Procedure at the Centre.
- Still-births in relation to the Centre.
- Provision of medical attendance at confinements.
- Post-natal work.

September 23rd, 1916.

(Full details of this work as carried out in the County of Kent are contained on pages 69 to 75 of this report).

*Prevention and Treatment of Venereal Diseases.*—Circular and memorandum of the Local Government Board relating to forms and records for use by medical officers of health, pathologists and clinic medical officers, under venereal diseases schemes.

A complete set of forms is drawn up as follows :—

- \*(1) Application for pathological outfit.
- \*(2) Application for supply of approved substitute for salvarsan.
- \*(3) Warning to be given to patient after administration of approved substitute.
- \*(4) Particulars to be supplied with each specimen sent to the laboratory.
- \*(5) Report of pathologist.
- \*(6) Instructions to patients suffering from syphilis.
- \*(7) Instructions to patients suffering from gonorrhœa.
- \*(8) Information on the dangers of venereal diseases and on facilities for treatment.
- (9) Laboratory register.
- (10) Annual return from pathological laboratories.

- (11 & 11a) Annual returns from medical officers of treatment centres.
- (12) Annual return of patients discharged from treatment centres.
- (13) Private hospital register of patients.
- (14) Identification cards (to be given to patients).
- (15, 15a & 15b) Case records for syphilis, gonorrhœa and soft chancre.
- (16 & 16a) Attendance cards for out-patient clinic and in-patient treatment.
- (17) Card for pathological examinations.
- (18) Card for case register.
- (19) Register of salvarsan substitutes supplied.

(The complete set of suggested forms, with several slight modifications, has been adopted for use in the Kent scheme).

Those forms marked with an asterisk are stocked by the Local Government Board and supplied free to councils on request.

Every medical practitioner should receive copies of forms 1 to 4 and 6 to 8, and each medical officer of health a stock of the same forms, with the exception of 3 and 4, for distribution to practitioners on application.

With the above forms, the Board also outlined a suitable notice for public advertisement announcing facilities for treatment, and suggestions for circulars to medical practitioners, local authorities and voluntary workers.

The circular gives particulars of the salvarsan substitutes approved by the Local Government Board, namely, Kharsivan, Arsenobillon and Novarsenobillon.

In connection with the gratuitous supply to doctors of outfits for the collection and transmission of pathological specimens, councils are instructed that they should defray the cost of postage on specimens, and a uniform payment of sixpence is suggested to cover out-of-pocket expenses.

Questions have arisen as to the liability of councils for the cost of treatment of patients at institutions outside the area of their schemes, and the Board states that it is their intention that councils should repay the cost if any considerable number of attendances have been made by these patients. The Board will decide this point in each instance on the facts before them.

A memorandum accompanying the circular suggests that travelling expenses should be repaid by the council to patients who are unable to pay cost of travelling to the nearest clinic. The names and addresses of patients must not be divulged by the medical officer of health in these cases.

December 22nd, 1916.

## SPECIAL REPORTS OF THE COUNTY MEDICAL OFFICER.

During the year the following reports were made :—

- |  |                             |
|--|-----------------------------|
| (1) Maternity and Child Welfare—Appointment of County Health Visitors .....  | March, June, Sept. and Dec. |
| (2) Medical Officership—East Kent combined District, and the Borough of Lydd.....  | March and June.             |
| (3) Pollution of the River Stour .....   | March.                      |
| (4) Sewage disposal at Sandling Military Camp .....  | June.                       |
| (5) Scheme for the treatment of Venereal Diseases .....  | June, Sept. and Dec.        |
| (6) Supply of Disinfectants by a Public Health Authority to houses at which cases of tuberculosis have been reported ..... | June and Dec.               |
| (7) Small-pox Hospital accommodation .....   | Sept. and Dec.              |

In addition, various reports concerning temporary administrative arrangements necessitated by the war, Local Government Board enquiries, special reports received, special visits of enquiry, work under the Housing, Town Planning, &c. Act, administration of the Midwives Act, tuberculosis work, laboratory work, etc., were presented during the year under consideration.

## VITAL STATISTICS.

POPULATION.—It has been found impossible, for 1915 and 1916, to adhere to the usual methods of estimation of the population, based on the census returns, owing to the large number of men usually in civil occupations who have been recruited for the Army and have been drafted to other districts in this country, or else sent abroad. Local populations have also varied to a considerable extent through the unprecedented migration of persons—particularly males and to a lesser extent females—into new areas to engage in munition work, etc. The Registrar-General has, therefore, by means which are available to him, worked out two estimates of population—one of the *civilian* population for calculating the death-rate (the death returns exclude entirely members of H.M. Forces) and one of the *total* population for calculating the birth-rate. The total population of England and Wales has been calculated by adding to the published estimate for 1914, the natural increase up to the middle of 1916, and the local populations are based on the assumption that the ratio between the total and civil populations in each district is the same as in England and Wales as a whole.

The estimated total population of the Administrative County at the middle of 1916, was 1,049,125 ; and the division of this total into urban and rural,



TABLE 1.—Information relating to Population, Acreage, Number of Houses etc., in the **Urban Districts** of the County of Kent.

DISTRICT.	Total Population 1916, as estimated by Registrar General.	Civil Population 1916, as estimated by Registrar General.	Total Census popula- tion 1911.	Total Census popula- tion 1901.	Acreage inclu- sive of water.	Persons per acre, 1916. (Total popula- tion).
Ashford ... ..	15,089	13,868	13,688	12,808	2,850	5·3
Beckenham ... ..	33,483	30,774	31,692	26,288	3,890	8·7
Bexley... ..	20,344	18,698	15,895	*13,476	4,942	4·2
Broadstairs and St. Peter's...	9,782	8,991	*9,921	*7,107	*2,770	3·6
Bromley (Borough) ... ..	35,000	32,169	33,646	27,397	4,696	7·5
Chatham (Borough) ... ..	41,406	38,056	42,250	37,057	4,356	9·6
Cheriton ... ..	5,622	5,167	7,577	7,091	1,159	4·9
Chislehurst ... ..	9,015	8,286	8,666	7,429	2,791	3·3
Dartford ... ..	23,747	21,826	23,609	18,644	4,242	5·6
Deal (Borough) ... ..	11,027	10,135	11,295	10,581	1,114	9·9
Dover (Borough) ... ..	42,180	38,769	43,645	42,672	1,948	21·7
Erith ... ..	38,093	35,011	27,750	25,296	3,859	9·9
Faversham (Borough) ... ..	12,482	11,472	10,619	11,290	685	18·3
Folkestone (Borough) ... ..	36,933	33,945	33,042	30,379	2,325	15·9
Footscray ... ..	9,368	8,610	8,493	*6,920	2,043	4·6
Gillingham (Borough) ... ..	47,925	44,049	52,252	42,745	4,988	9·7
Gravesend (Borough) ... ..	29,705	27,302	28,115	27,196	1,260	23·6
Herne Bay ... ..	7,673	7,052	7,780	6,726	887	8·7
Hythe (Borough) ... ..	7,419	6,819	6,387	5,557	2,608	2·9
Lydd (Borough) ... ..	2,464	2,265	2,874	2,675	12,082	0·3
Maidstone (Borough) ... ..	33,879	31,138	35,475	33,516	4,008	8·5
Margate (Borough) ... ..	27,154	24,957	*28,458	*24,127	*2,463	11·1
Milton Regis ... ..	7,358	6,763	7,475	7,086	2,554	2·9
New Romney (Borough) ... ..	1,299	1,194	1,333	1,328	1,364	1·0
Northfleet ... ..	15,599	14,337	14,184	12,906	3,932	4·0
Penge .. ..	24,137	22,184	22,330	22,465	770	31·4
Queenborough (Borough) ... ..	3,314	3,046	*2,738	*1,555	*695	4·8
Ramsgate (Borough) ... ..	26,981	24,798	29,603	27,733	2,306	11·7
Rochester (City) ... ..	33,002	30,332	31,384	30,590	2,936	11·3
Sandgate ... ..	1,983	1,823	2,827	2,294	430	4·7
Sandwich (Borough) ... ..	3,055	2,808	3,040	3,170	707	4·4
Sevenoaks ... ..	9,149	8,409	9,182	8,106	3,259	2·9
Sheerness ... ..	18,059	16,598	17,487	18,179	864	20·9
Sittingbourne... ..	8,904	8,184	8,380	8,943	1,004	8·9
Southborough ... ..	6,917	6,357	7,001	6,977	1,702	4·1
Tenterden (Borough) ... ..	3,322	3,053	3,379	3,243	8,946	0·4
Tonbridge ... ..	14,818	13,619	14,796	12,736	1,356	11·0
Tunbridge Wells (Borough) ... ..	35,160	32,316	35,697	33,373	3,991	8·9
Walmer ... ..	4,148	3,812	5,347	5,614	988	4·2
Whitstable ... ..	8,665	7,964	7,982	7,086	795	10·9
Wrotham ... ..	4,289	3,942	4,169	3,571	8,883	0·5
	729,949	670,898	711,443	643,932	119,448	6·12

The Civil Parish of Folkestone-next-Sandgate is included in Sandgate for Public Health Administrative Purposes.

\*Corrected for areas transferred from rural to urban districts since the date of the census.



TABLE 2.—Information relating to Population, Acreage, Number of Houses, etc., in the **Rural Districts** of the County of Kent.

DISTRICT.				Total population, 1916, as estimated by Registrar General.	Civil population, 1916, as estimated by Registrar General.	Census population, 1911.	Census population, 1901.	Acreage inclusive of water.	Persons per acre, 1916. (Total population).
Ashford, East	...	...	...	14,711	13,521	13,616	13,112	54,800	0·27
Ashford, West	..	...	...	7,565	6,953	7,964	7,751	39,490	0·20
Blean...	...	...	...	7,619	7,003	7,597	7,054	26,884	0·29
Bridge	...	...	..	9,681	8,898	11,194	10,971	41,797	0·24
Bromley	...	...	...	24,301	22,335	21,958	18,808	28,839	0·85
Cranbrook	...	...	...	13,156	12,092	13,689	12,944	41,315	0·32
Dartford	...	...	...	44,155	40,582	39,909	37,532	37,997	1·17
Dover	...	...	...	7,778	7,149	8,299	6,270	27,121	0·29
Eastry	...	...	...	13,469	12,379	13,161	12,168	43,682	0·31
Elham	...	...	...	7,975	7,330	7,441	6,813	37,154	0·22
Faversham	...	...	...	15,413	14,166	14,129	15,132	44,000	0·36
Hollingbourn	...	...	...	13,057	12,001	12,845	12,546	57,670	0·23
Hoo	...	...	...	4,277	3,931	3,965	4,262	19,727	0·22
Maidstone	...	..	...	16,572	15,231	16,398	15,570	34,996	0·48
Malling	...	...	...	24,398	22,424	24,233	24,724	38,458	0·64
Milton	...	...	...	13,404	12,320	12,453	12,161	27,727	0·49
Romney Marsh	...	...	...	2,861	2,630	2,797	2,563	30,376	0·09
Sevenoaks	...	..	...	24,355	22,385	24,029	22,684	63,336	0·39
Sheppey	...	...	...	4,623	4,249	*4,157	*2,541	*20,806	0·23
Strood	...	...	...	16,357	15,034	15,354	14,438	32,498	0·51
Tenterden	..	...	...	5,770	5,303	6,001	5,523	38,378	0·16
Thanet	...	...	...	9,791	8,999	*10,564	*9,494	*18,639	0·53
Tonbridge	...	...	...	17,888	16,441	17,769	17,247	46,853	0·39
Total in Rural Districts				319,176	293,356	309,522	292,308	852,543	0·38
,, Urban ,,				729,949	670,898	711,443	643,932	119,448	6·20
Total for County				1,049,125	964,254	1,020,965	936,240	971,991	1·08

\* Corrected for areas transferred from rural to urban districts since the date of the census.

shows that 729,949 persons were grouped as living in urban areas, and 319,176 in rural. The density of population in the urban districts was 6·2 persons per acre and in rural 0·38. The greatest density of population is to be noted in Penge, where there are 31·4 persons per acre, in Gravesend with 23·6, in Dover with 21·7, and in Sheerness with 20·9. There are certain urban districts in which the density is simply that of a rural district, *e.g.*, Lydd, Tenterden, Wrotham and New Romney. The rural district which shows the greatest density of population is Dartford with 1·17 per acre.

The estimated civil population of the urban districts, was 670,898 with a density of 5·7 per acre, and of the rural districts 293,356, with a density of 0·31. The local *civilian* densities are correspondingly lower than the *total* densities.

POPULATION OF THE COUNTY.

	Total Census Population, 1911.	Estimated Civil Population, 1916.	Estimated Total Population, 1916.
Urban (41 districts) .....	*711,443	670,898	729,949
Rural (23 districts) .....	*309,522	293,356	319,176
TOTAL .....	1,020,965	964,254	1,049,125

\*Corrected for areas transferred from rural to urban districts since the date of the Census.

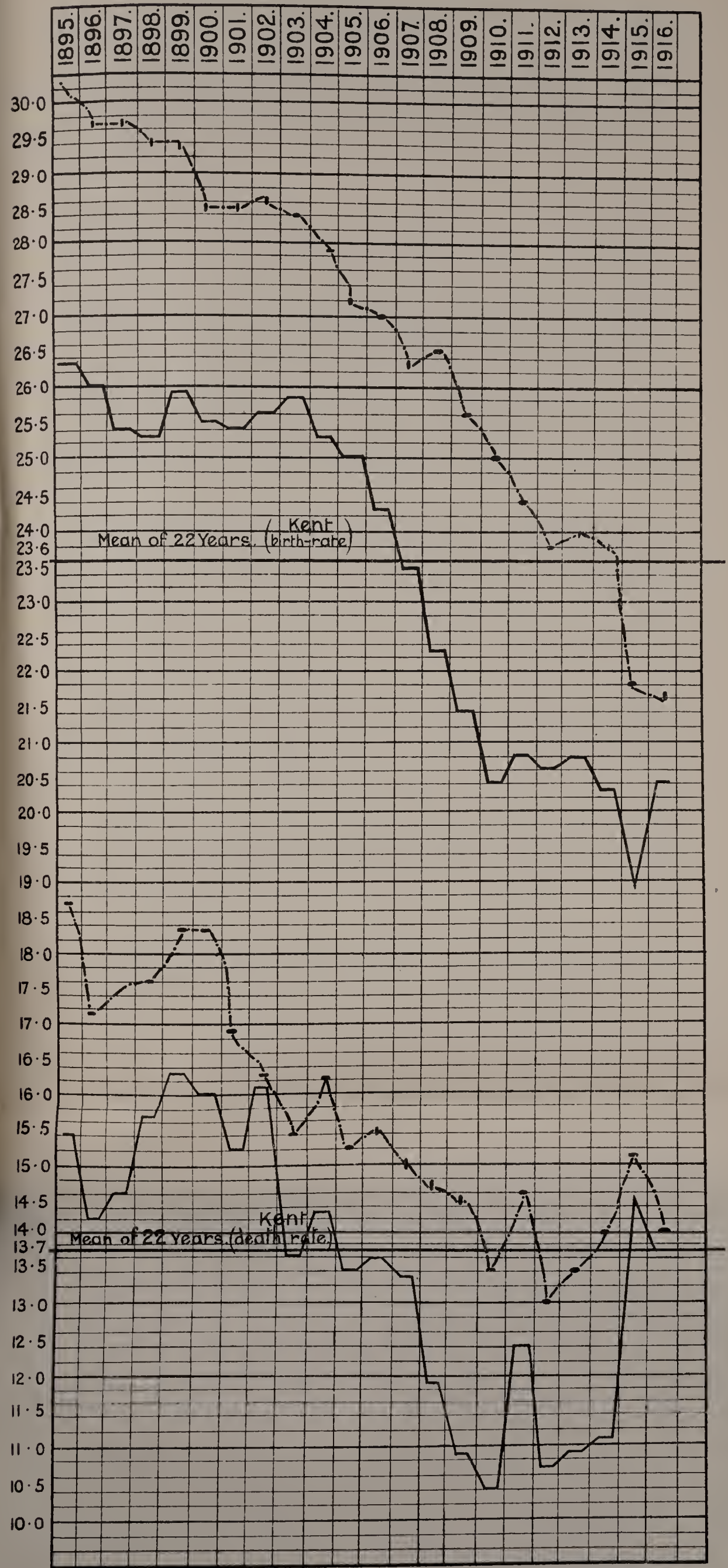
BIRTHS.—During the year, the births of 21,383 living children were registered, which is considerably higher than the total of the previous year. Male births numbered 11,005, and females 10,378. The total excess of births over deaths was 8,187, *viz.*, 4,338 males and 3,849 females.

As the births registered include children of soldiers as well as of civilians, the calculation of birth-rates is worked out on the estimated *total* population.

The birth-rate was 20·4 per 1,000, as compared with 18·9 in 1915. It will be observed from the subjoined record, and from the diagram (facing this page), that the continuous decline in the birth-rate, of recent years, broken to a slight extent in 1911 and 1913, is again broken in 1916. The rate in urban districts has increased in 1916 by 1·8 per 1,000, and in rural districts by 0·9.



Diagram showing the Birth Rates and Death Rates in the County of Kent, for the years 1895-1916 Inclusive, compared with similar rates for England and Wales



The two top lines show the birth-rates and the two bottom lines the death-rates.

Kent shown thus ————— England and Wales shown thus - - - - -

The above records are for the Administrative County, from and including 1908; previous to that year, records for the Registration County (shown) only are available.





The rate for England and Wales was 21·6, compared with 21·8 in 1915. The rate for Kent is invariably lower than the rate for the country as a whole.

Year.	1908	1909	1910	1911	1912	1913	1914	1915	1916
Urban Districts...	22·5	20·9	19·8	21·2	20·8	20·7	20·4	19·0	20·8
Rural Districts ...	21·9	22·6	21·8	19·8	20·1	20·9	20·1	18·7	19·6
Whole County ...	22·3	21·4	20·4	20·8	20·6	20·8	20·3	18·9	20·4

In the following urban districts, rates of over 24 per 1,000 were registered :—Queenborough 31·4, Sheerness 28·3, Gillingham 25·6, Cheriton 25·3, Chatham 25·0, Northfleet 24·8, Dover 24·2, and Sittingbourne 24·1.

The lowest urban birth-rate was recorded in Margate, viz., 12·0, and rates below 16 per 1,000 were recorded as follows :—Broadstairs 12·4, Sevenoaks 13·7, Tunbridge Wells 14·3, Tenterden 15·1, Footscray 15·3, and Herne Bay 15·6.

In the rural districts there was only one with a rate exceeding 25 per 1,000, viz., Sheppey 27·4. Hoo was the next highest, with 24·6, and it is to be noted that this district had the highest rural rate in the four preceding years. The lowest rates were registered in Thanet 14·6, Dover 16·1, and West Ashford 16·3.

The majority of the above districts remain fairly constant with either high or low rates, as the case may be.

STILL-BIRTHS.—Information with reference to the number of still-births is only given by the medical officers of health in twenty-one districts. These number 224 altogether. Assuming that the ratio of still-births to the total births notified in these districts is the same throughout the county we arrive at a total of 534 of such occurrences.

In the section devoted to consideration of the work of midwives it will be observed that 221 notifications of still-birth were received by the local supervising authority during 1916, as compared with 206 in the previous year, and it will be seen that these figures do not even approximate to the total of such occurrences.

ILLEGITIMATE BIRTHS.—Table IV. of the forms issued by the Local Government Board requires that illegitimate births shall be distinguished from legitimate. It will be seen that 6·00 per cent. of all births were

TABLE 3.—Showing the total number of deaths, deaths under one year of age, and the number of births—legitimate and illegitimate—which were registered in the different **Urban Districts** in the County of Kent during the year 1916.

DISTRICT.	DEATHS.		BIRTHS.				INFANTILE MORTALITY.				No. of still-births.
	Net number of deaths of civilians at all ages.	Net death-rate per 1,000 of the civil population.	Legitimate.	Illegitimate.	Total.	Birth-rate. (Total population).	Deaths of Infants under one year of age.			Deaths of Infants under one year of age per 1,000 Births.	
							Legitimate.	Illegitimate.	Total.		
Ashford ... ..	201	14·5	303	25	328	21·8	25	3	28	86	1
Beckenham ... ..	327	10·7	558	24	582	17·4	33	3	36	62	—
Bexley... ..	270	14·5	436	15	451	22·2	41	3	44	98	—
Broadstairs and St. Peter's...	91	10·2	110	11	121	12·4	2	1	3	25	—
Bromley (Borough) ... ..	372	11·6	580	50	630	18·0	41	12	53	84	13
Chatham (Borough) ... ..	572	15·1	976	57	1,033	25·0	75	11	86	84	57
Cheriton ... ..	67	13·0	132	10	142	25·3	12	—	12	85	10
Chislehurst ... ..	94	11·3	154	7	161	17·9	9	1	10	62	—
Dartford ... ..	242	11·1	492	21	513	21·7	34	3	37	72	—
Deal (Borough) ... ..	148	14·7	207	17	224	20·4	17	2	19	85	4
Dover (Borough) ... ..	615	15·9	958	60	1,018	24·2	67	11	78	77	—
Erith ... ..	381	10·1	798	29	827	21·8	47	1	48	58	2
Faversham (Borough) ... ..	199	17·4	275	22	297	23·8	25	1	26	88	—
Folkestone (Borough) ... ..	470	13·9	725	87	812	22·0	56	8	64	79	33
Footscray ... ..	99	11·5	136	7	143	15·3	10	2	12	84	—
Gillingham (Borough) ... ..	591	13·5	1,179	47	1,226	25·6	83	2	85	70	31
Gravesend (Borough) ... ..	447	16·4	677	24	701	23·6	53	4	57	82	—
Herne Bay ... ..	100	14·2	99	20	119	15·6	10	3	13	110	—
Hythe (Borough) ... ..	91	13·4	146	6	152	20·5	11	1	12	79	—
Lydd (Borough) ... ..	23	10·2	45	5	50	20·3	3	—	3	60	—
Maidstone (Borough) ... ..	525	16·9	698	40	738	21·8	51	2	53	72	—
Margate (Borough) ... ..	314	12·6	291	34	325	12·0	26	1	27	83	9
Milton Regis ... ..	111	16·5	152	5	157	21·4	12	1	13	83	6
New Romney (Borough) ... ..	18	15·1	26	4	30	23·1	3	—	3	100	—
Northfleet ... ..	198	13·9	375	11	386	24·8	29	—	29	75	—
Penge ... ..	306	13·8	427	21	448	18·6	24	1	25	56	7
Queenborough (Borough) ... ..	31	10·2	102	2	104	31·4	7	—	7	67	—
Ramsgate (Borough)... ..	418	16·9	460	42	502	18·7	38	4	42	84	21
Rochester (City) ... ..	411	13·6	675	35	710	21·6	45	8	53	75	18
Sandgate ... ..	15	8·3	31	1	32	16·2	nil	nil	—	nil	—
Sandwich (Borough) ... ..	52	18·6	51	7	58	19·0	5	—	5	87	—
Sevenoaks ... ..	109	13·0	121	4	125	13·7	6	1	7	56	—
Sheerness ... ..	231	14·0	494	17	511	28·3	36	3	39	77	—
Sittingbourne ... ..	112	13·7	197	17	214	24·1	17	1	18	84	8
Southborough ... ..	102	16·1	121	12	133	19·3	4	4	8	60	—
Tenterden (Borough) ... ..	42	13·8	47	3	50	15·1	4	—	4	80	—
Tonbridge ... ..	185	13·6	266	22	288	19·5	16	3	19	66	—
Tunbridge Wells (Borough)... ..	492	15·3	455	47	502	14·3	26	5	31	62	—
Walmer ... ..	56	14·7	65	1	66	16·0	5	—	5	76	—
Whitstable ... ..	131	16·5	151	18	169	19·6	11	—	11	65	—
Wrotham ... ..	49	12·5	74	4	78	18·2	2	—	2	26	—
TOTAL URBAN ... ..	9,308	13·9	14,265	891	15,156	20·8	1,021	106	1,127	75	220

The above totals are taken from the Registrar General's statistics, and the rates are worked out on the populations supplied by him. In many instances the figures given by the local medical officers of health differ from those shown herewith.



**TABLE 4.**—Showing the total number of deaths, deaths under one year of age, and the number of births—legitimate and illegitimate—which were registered in the different **Rural Districts** in the County of Kent during the year 1916.

DISTRICT.	DEATHS.		BIRTHS.				INFANTILE MORTALITY.				No. of still births.
	Net number of deaths of civilians at all ages.	Net death-rate per 1,000 of the civil population.	Legitimate.	Illegitimate.	Total.	Birth-rate. (Total population).	Deaths of Infants under one year of age.			Deaths of Infants under one year of age per 1,000 births.	
							Legitimate.	Illegitimate.	Total.		
Ashford, East ... ..	191	14·2	250	26	276	18·8	16	1	17	62	—
Ashford, West ... ..	98	14·1	114	9	123	16·3	8	—	8	65	—
Blean ... ..	110	15·8	139	18	157	20·7	2	3	5	32	—
Bridge... ..	127	14·3	196	17	213	22·1	12	2	14	66	—
Bromley ... ..	292	13·1	417	33	450	18·6	34	6	40	89	—
Cranbrook ... ..	148	12·3	205	24	229	17·5	8	3	11	48	—
Dartford ... ..	502	12·4	987	33	1,020	23·2	69	5	74	73	—
Dover ... ..	78	11·0	119	6	125	16·1	10	—	10	80	—
Eastry... ..	154	12·5	229	13	242	18·0	12	4	16	66	—
Elham... ..	103	14·1	135	6	141	17·7	10	1	11	78	—
Faversham ... ..	252	17·8	326	23	349	22·7	23	1	24	69	—
Hollingbourn... ..	162	13·5	233	15	248	19·0	15	—	15	61	—
Hoo ... ..	56	14·3	101	4	105	24·6	3	—	3	29	—
Maidstone ... ..	211	13·9	266	20	286	17·3	19	—	19	67	—
Malling ... ..	313	14·0	437	28	465	19·1	36	3	39	84	—
Milton... ..	154	12·6	260	17	277	20·7	22	2	24	87	—
Romney Marsh ... ..	30	11·5	50	2	52	18·2	3	—	3	58	—
Sevenoaks ... ..	266	11·9	392	27	419	17·3	20	3	23	55	—
Sheppey ... ..	43	10·2	117	10	127	27·4	7	—	7	55	4
Strood... ..	191	12·8	352	12	364	22·3	30	1	31	85	—
Tenterden ... ..	79	14·9	96	6	102	17·7	2	1	3	30	—
Thanet ... ..	141	15·7	124	18	142	14·6	7	3	10	71	—
Tonbridge ... ..	187	11·4	292	23	315	17·7	7	5	12	38	—
Total in Rural Districts ...	3,888	13·3	5,837	390	6,227	19·6	375	44	419	68	4
„ in Urban Districts ...	9,308	13·9	14,265	891	15,156	20·8	1,021	106	1,127	75	220
Total for County ... ..	13,196	13·7	20,102	1,281	21,383	20·4	1,396	150	1,546	73	224

The above totals are taken from the Registrar General's statistics, and the rates are worked out on the populations supplied by him. In several instances the figures given by the local medical officers of health differ from those shown herewith.

illegitimate, which is higher than in any previous year for which records are available. The percentage was 6·27 in rural and 5·88 in urban districts.

The following shows the percentage of illegitimate births, to the total births registered, in Kent, each year since 1895 :—

1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
3·89	3·93	4·16	3·82	3·95	3·96	3·94	3·75	4·07	4·02	3·99
1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916
4·17	4·15	3·94	3·85	3·68	4·13	4·14	4·36	3·85	4·54	6·00

DEATHS.—The net number of deaths registered in the county was 13,196. This is 1,381 less than the net aggregate of the previous year. 6,667 of the deaths were of males and 6,529 females.

In present circumstances it has been found impracticable to assign to the district of residence, all deaths of soldiers occurring during 1916, and it has therefore been decided by the Registrar-General to limit the tabulation of deaths by local areas to deaths of civilians only. As the estimated populations also exclude members of H.M. Forces, the limitation referred to enables an accurate death-rate to be obtained relating to the *civil* population only. *It should especially be noted, however, that the death-rates for 1916 (and also 1915), thus obtained, are hardly comparable with the rates of previous years,* and many medical officers of health (who, of course, have special knowledge of local circumstances affecting this question) apparently do not agree that the populations of their particular districts, on which the rates are based, are approximately correct. It must also be noted that the death-rate amongst men of military age would naturally be lower than the rate amongst the population above and below that age, and therefore the exclusion of men on service will adversely affect to a slight extent the rates as calculated.

The death-rate for Kent, per 1,000 of the civil population for 1916, is 13·7. This is a satisfactory return, and compares favourably with a death-rate of 14·0 for England and Wales. Owing to the variations of population, as previously mentioned, the 1916 rates for the sanitary districts in Kent have not been standardised as in recent years.



In the urban districts of Kent, 9,308 net deaths were registered, which is 703 lower than the previous year's total, and represents a rate of 13·9 per 1,000. In the combined rural districts there were 3,888 deaths. This is a decrease of 291 on the previous year, and represents a rate of 13·3 per 1,000. The rural rate was, as has been the case for the past few years, lower than the urban rate.

Of the forty-one urban districts, a reference to Table 3 shows that six areas had death-rates of under eleven per 1,000. These were Sandgate 8·3, Erith 10·1, Broadstairs, Lydd and Queenborough 10·2 each, and Beckenham 10·7. On the other hand, only one area had a rate of over eighteen per 1,000, viz., Sandwich 18·6. Faversham had a rate of 17·4, and Gravesend, Maidstone, Milton Regis, Ramsgate, Southborough and Whitstable had rates of between 15 and 16 per 1,000.

As regards rural districts, the following five had rates of under twelve per 1,000, viz.: Sheppey 10·2, Dover 11·0, Tonbridge 11·4, Romney Marsh 11·5 and Sevenoaks 11·9. There were no excessively high rates, the highest being Faversham with 17·8. Two others had rates of over fifteen per 1,000, whilst seven had rates between fourteen and fifteen, in addition to those enumerated. It will thus be seen that there was not a great variation in the rates recorded.

The record for the administrative county for the years 1908—1916 is as follows:—

Year .....	1908	1909	1910	1911	1912	1913	1914	1915	1916
Urban Districts...	11·7	10·6	9·9	12·9	11·0	11·1	11·5	14·17	13·9
Rural Districts ...	12·5	11·7	11·5	11·3	9·7	10·3	10·2	13·8	13·3
Whole County ...	11·9	10·9	10·4	12·4	10·7	10·9	11·1	14·5	13·7

(The death-rates recorded in the different sanitary areas are more accurate than was the case in years previous to 1911, as since that year it has been the practice of the Registrar-General to forward to the County Medical Officer information relating to the deaths of persons who may have died in an area other than that in which they were usually resident. It is obvious that some such adjustment was necessary, otherwise those districts in which there is a



large public institution receiving inmates from all over the country, might be debited with the deaths occurring in such institution. It had not often happened previously that such deaths were not deducted at the end of each year, but frequently the deaths so deducted were not debited against any other area. The information forwarded by the Registrar-General enables proper correction to be made, and the details are classified by the County Medical Officer's staff, who transmit them to the districts concerned. This fact of more fully debiting deaths against the districts has, of course, resulted in an increased death-rate in those districts where it had not been possible to arrange for this correction previously).

The diagram facing page 20 shows the fluctuations in the rate for the last twenty-one years, compared with the rate for England and Wales.

INFANTILE MORTALITY.—The infantile mortality rate is expressed as the rate per 1,000 births, of children dying under the age of one year. There were 21,383 births registered during the year, and 1,546 deaths of children under one year of age. The infantile mortality was therefore at the rate of 73 per 1,000 births, which compares favourably with any rate previously recorded in Kent. The rate of mortality in towns was higher than in the country, the figures being 75 and 68 respectively, as compared with rates of 92 and 82 in the previous year. The record for the administrative county for the years 1908-1916 is as follows:—

Year. ....	1908	1909	1910	1911	1912	1913	1914	1915	1916
Urban Districts...	89	82	79	111	78	79	79	92	75
Rural Districts ...	84	77	80	103	72	80	71	82	68
Whole County ...	88	81	79	109	76	80	77	89	73
England & Wales	121	109	106	130	95	109	105	110	91

Attention has previously been directed to the fact that the method of feeding infants is of the greatest importance in enabling them to pass successfully through the dangerous autumn months, and a comparison between the different causes of death registered among infants in the years 1915 and 1916, is instructive. These points are set out in the following tabulation:—

TABLE 5.—Showing the chief causes of death among infants, in the years 1915 and 1916.

CAUSE OF DEATH.	URBAN.		RURAL.	
	Numbers of Deaths.		Numbers of Deaths.	
	1915.	1916.	1915.	1916.
Premature birth ... ..	243	470	106	172
Congenital malformations ... ..	65		17	
Atrophy, debility and marasmus ...	155		66	
Bronchitis ... ..	110	82	51	36
Pneumonia ... ..	192	89	56	28
Whooping Cough ... ..	61	45	17	26
Diarrhœa, &c. ... ..	128	129	37	56

It will be observed that the total deaths amongst infants in urban and rural districts, from pneumonia, bronchitis, and whooping cough, show a decrease compared with the previous year, whilst the deaths from diarrhœa &c., show an increase. The differences are particularly marked in the case of pneumonia and diarrhœa. As regards the group comprising premature birth, atrophy, debility and marasmus, and congenital malformations the numbers of deaths have remained constant.

The usual tables showing detailed causes of death among children under one year of age are not available this year, which is a cause of regret as they were of great interest and value.

Out of the 1546 deaths of infants, 150 were of illegitimate children. There were only 1281 births of illegitimate children registered, so that the infantile mortality rate among them was 118 per 1,000, as against a rate of 69 among those born in wedlock. This is a significant fact, although the difference is less marked than in previous years.

The following summary shows a comparison of the death-rates among

illegitimate children per thousand such births, with the death-rates among legitimate infants, for each of the years 1908 to 1916 :—

Year.		1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	*1916.
Rate of deaths per 1000 births among	Legitimate infants ...	80	77	75	104	74	76	73	86	69
	Illegitimate infants ...	178	164	185	228	138	149	175	150	118

\* In several districts the deaths have not been divided into legitimate and illegitimate, in which cases they have been regarded as legitimate. It is probable therefore that the disparity of rates in 1916 is greater than is shown by the figures.

The variations in the infantile mortality rates in the different districts are considerable and urban rates are recorded from nil in Sandgate to 110 in Herne Bay. It will be observed generally, that if there are any extremely high or extremely low rates, they are recorded in small districts where the difference of a few deaths makes a large variation in the rate. For instance Herne Bay had the fifth lowest rate in 1915, whilst the rate in Sandgate (with only one death) was very little below the average.

The lowest rates after Sandgate were Broadstairs 25, Wrotham 26, Penge 56, Sevenoaks 56 and Erith 58 ; and the highest rates, after Herne Bay, were New Romney 100 and Bexley 98.

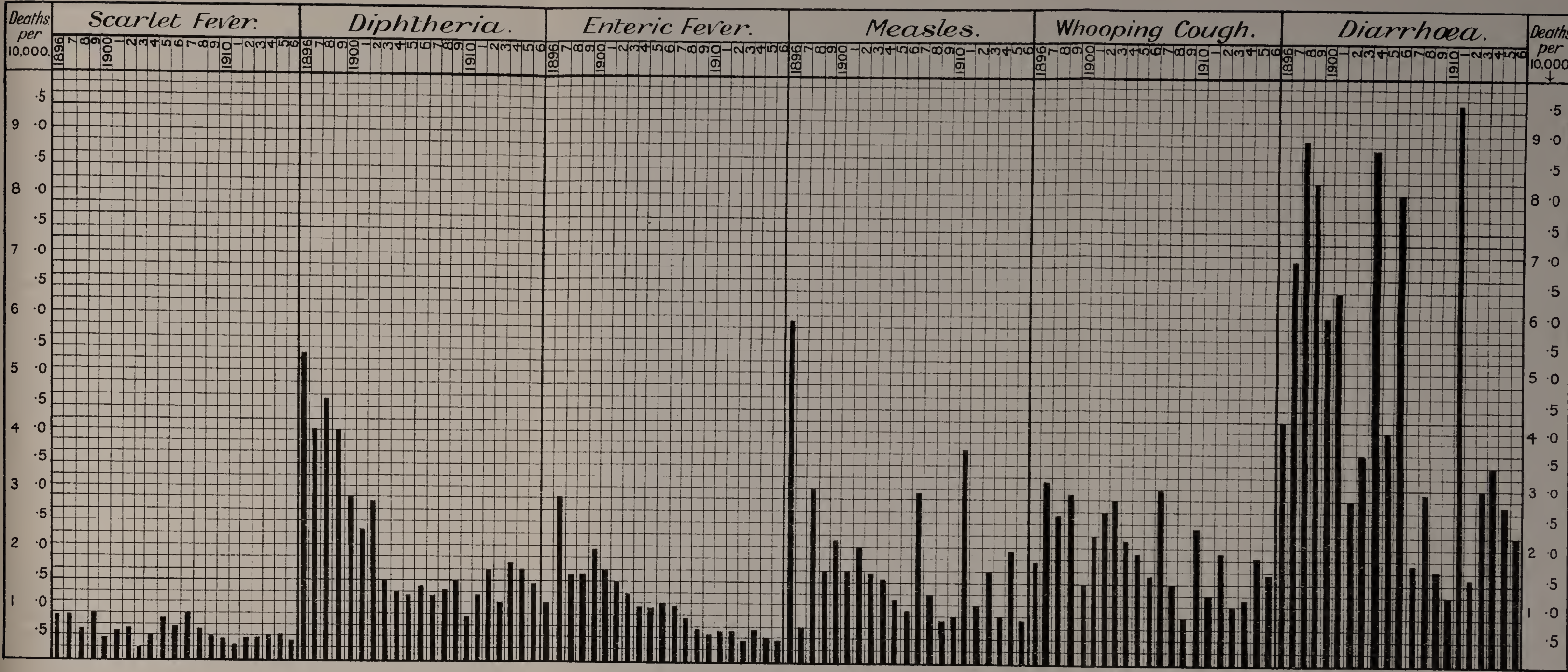
In the rural districts there were very satisfactory rates in Hoo 29, Tenterden 30, Blean 32 and Tonbridge 38, whilst comparatively high rates were recorded in Bromley 89, Milton 87, Strood 85 and Malling 84.

ZYMOTIC MORTALITY.

For statistical purposes, only the mortality from the seven chief zymotic diseases is included in the return known as “zymotic mortality.” The diseases are small-pox, scarlet fever, diphtheria (and membranous croup), enteric (and typhus and continued fevers), measles, whooping cough and diarrhoea (including enteritis). The following table gives particulars relating to the prevalence of, and the mortality from, these diseases in the whole



Diagram showing the Death-rates (per 10,000 persons living) from Scarlet Fever, Diphtheria, Enteric Fever, Measles, Whooping Cough, and Diarrhœa, in the County of Kent for each of the years 1896 to 1916 inclusive.



The above records are for the Administrative County from and including 1908; previous to that year, records for the Registration County (shown) only are available.





county (*civil population only*) and a comparison with the mortality recorded in the whole of England and Wales for the year 1916 :—

Disease.	No. of Cases.	No. of Deaths.	Rates of Deaths.		Death-rate in England and Wales in 1916 per 1,000 Living Persons.
			Per 100 Persons Attacked.	Per 1,000 Persons Living.	
Small-pox ... ..	—	—	—	—	0·00
Scarlet Fever ... ..	1856	25	1·35	0·03	0·04
Diphtheria and Membranous Croup ... ..	1581	134	8·48	0·14	0·14
Enteric, Typhus and Continued Fevers ... ..	210	35	16·67	0·04	0·03
Measles ... ..	10349	76	0·74	0·08	0·15
Whooping Cough ... ..	Not notifiable	150	?	0·16	0·16
*Diarrhœa, including Enteritis (under 2 years)... ..	do.	215	?	*10·06	*12·47
Totals ... ..	—	635	—	0·66	—

\* The figures relating to diarrhœa have reference to children dying under two years of age, and the death-rate is per 1,000 births and not per 1,000 of the population.

Compared with the previous year, it is found that in each of the notifiable diseases above tabulated, there was a lesser number of cases in 1916 (the figures for 1915 were also in each instance lower than in 1914), but the fatality was higher in the year under review. The zymotic mortality *per 1,000 persons living* was lower than that recorded in the previous year, the chief contributing disease being diarrhœa.

The diagram facing page 28 is interesting as showing a comparison of the death-rates in Kent per 10,000 persons living, from each of the zymotic diseases except small-pox, during the last twenty-one years.

## ISOLATION HOSPITALS.

There are forty-four isolation hospitals in the county, in which accommodation is provided for 1,447 patients suffering from infectious ailments *other than small-pox*. Four isolation hospitals, the Isle of Thanet, Bromley and Beckenham, Keycol Hill and St. William's, Rochester, are large institutions containing 100 or more beds each. They are provided by combinations of authorities.

The following is a list of these hospitals, together with the accommodation which they provide and the number of diseases which can be concurrently isolated :—



## ISOLATION HOSPITALS PROVIDED BY SEPARATE AUTHORITIES.

## A. Urban Districts.

District.	No. of Beds.	No. of Separate Diseases.	Remarks.
Ashford... ..	43 ?	3	
Bexley ... ..	44	2	{ Pauper cases treated at Bow Arrow Hospital, Dartford.
Cheriton ... ..	16	1	{ This hospital also receives cases from Hythe.
Dover ... ..	50	3	{ This hospital is also used by the Rural District of Dover.
Erith ... ..	52	2	
Faversham ... ..	16	2	{ This hospital will also admit cases from Faversham R.D. if neces- sity arises, and <i>vice versa</i> .
Do. ... ..	8	1	{ This is the Faversham small-pox Hospital, which has now been re- served for the treatment of cases of cerebro-spinal meningitis occurring in the Urban and Rural Districts of Faversham.
Folkestone ... ..	49	3	{ This hospital is used by Sandgate. In addition, the War Office has erected two temporary blocks for the accommodation of military cases.
Gillingham ... ..	50	3	For ordinary infectious diseases.
Do. ... ..	16	1	{ This is the Gillingham small pox Hospital, which has now been re- served for the treatment of cases of cerebro-spinal meningitis occurring in Chatham, Gillingham and Ro- chester.
Gravesend ... ..	20	1	
Herne Bay ... ..	8	1	{ Herne Bay also have an arrangement to use the Blean Hospital.
Lydd ... ..	6	3	
Maidstone .. ...	20	2	
Penge ... ..	—	5	{ The Borough of Croydon isolates and treats, by agreement, all cases of infectious disease arising in Penge.
Sevenoaks ... ..	12	3	
Southborough ... ..	6	1	
Tonbridge ... ..	37	3	
Tunbridge Wells ... ..	57	4	
*Wrotham ... ..	16	2	

\* This was built as a small-pox hospital, but is used to accommodate cases of the ordinary infectious diseases on the few occasions when outbreaks occur.

*B. Rural Districts.*

District.	No. of Beds.	No. of Separate Diseases.	Remarks.
Elham ... ..	9	2	
Eastry ... ..	18	2	{ This hospital is also used by Sandwich Borough.
East Ashford ... ..	14	2	
Bridge ... ..	31	3	
Blean ... ..	34	3	{ This hospital is also used by Herne Bay and Whitstable.
Cranbrook ... ..	5	1	
Faversham ... ..	36	4	{ Cases can be sent to Faversham U.D. hospital, by arrangement, if neces- sity arises, and <i>vice versa</i> .
*Hollingbourn ... ..	22	2	
Hoo ... ..	18	2	
Maidstone ... ..	16	2	
Malling ... ..	25	3	
Romney Marsh ... ..	16	2	{ This hospital is used by the Borough of New Romney.
Sevenoaks—Hever ... ..	12	2 (? 3)	
„ Otford ... ..	24	3	{ Accommodation for at least six more patients in wooden buildings and Berthon tents.
Sheppey ... ..	8	1	
Strood ... ..	56	3	Cases also received from Northfleet.
Tonbridge ... ..	21	3	
West Ashford ... ..	10	1	

## JOINT HOSPITALS.

Hospital.	No. of Beds.	No. of Separate Diseases.	Authorities contributing.
Bromley and Becken- ham Joint Hospital }	120	3	{ Borough of Bromley. Beckenham Urban District. Chislehurst Urban District. Footscray Urban District. Bromley Rural „
Isle of Thanet Joint Hospital }	116	3	
St. William's Hos- pital, Rochester }	100	3	{ City of Rochester. Borough of Chatham. In addition there is a military pavilion of twenty-two beds.
Keycol Hill Hospital, } Bobbing	102	4	
Deal and Walmer Hos- pital }	20	2	{ Milton Regis Urban. Sittingbourne „ Milton Rural. Sheerness Urban District. Queenborough Borough. Deal Borough. Walmer Urban District.
Dartford Hospital ...	88	3	

\* Now temporarily used as a small-pox hospital. Arrangements made with Maidstone R.D.C. to receive cases of ordinary infectious disease arising in Hollingbourn.

The following information relates to improvements made during the year 1916, and to existing defects and deficiencies, in connection with the isolation hospitals in the county :—

*Cheriton*.—A ward should be provided for the treatment of cases of diphtheria at this hospital.

*Southborough* —A new sewage disposal plant has been introduced during the year

*Tonbridge*.—Various minor improvements have been undertaken during the year.

*Wrotham*.—This hospital requires re-painting and doing up.

*Dartford Rural*.—Certain extensions are desirable, such as enteric fever wards, etc., but these cannot be carried out until after the war.

*Faversham Rural*.—A new disinfector has been installed at the Beacon Hill hospital.

*Sevenoaks Rural*.—A new pavilion for twelve beds has been erected at the Otford hospital.

#### SMALL POX HOSPITALS.

The question of hospital accommodation for cases of small-pox, has received great consideration since the outbreak of war. Following a circular letter on this subject from the Secretary of the Local Government Board, dated August 28th, 1914, each district council in Kent was approached on this matter. After extended negotiations, and a meeting with all authorities without adequate accommodation, I am glad to be able to state that, at the time of writing this report, every district except four in the county is in a position to offer immediate hospital treatment for any case of this disease which might arise. The exceptions are Maidstone, Hythe, Cheriton and Elham. The following tabulation sets out the present position of affairs in detail :—

#### *Urban Districts :—*

District.	Population Served.	No. of Beds.	Remarks.
*Ashford.....	<i>See West Ashford</i>		.
Beckenham .....	104,474 .....	24	Joint Hospital, capable of large extension
Bromley Borough.....			
Chislehurst .....			
Footscray .....			
Bromley Rural.....			



# Small-pox Hospitals.

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District.	Population Served,	No, of Beds.	Remarks.		
Bexley .....	18,660 .....	?	Arrangement with Metropolitan Asylums Board		
Broadstairs and St. Peter's Margate .....	70,118 .....	16	Joint Hospital		
Ramsgate .....					
Thanet, Isle of.....					
Bromley .....	<i>See Beckenham</i>				
Chatham .....	134,936 .....	18	Joint Hospital capable of large extension		
Rochester .....					
<i>Also * Hoo</i> <i>* Gillingham</i>					
Cheriton .....	<i>See Hythe</i>				
Chislehurst .....	<i>See Beckenham</i>				
Dartford .....	22,337 .....	?	Arrangement with M.A.B.		
*Deal .....	<i>See Eastry Rural</i>				
Dover .....	45,073 .....	20	Capable of large extension		
<i>Also * Dover Rural</i>					
Erith .....	35,238 .....	?	Arrangement with M.A.B.		
*Faversham .....	<i>See Faversham Rural.</i>				
Folkestone .....	32,753 .....	6	This accommodation is very small for the population concerned.		
Footscray .....	<i>See Beckenham</i>				
Gillingham .....	<i>See Chatham.</i>				
Gravesend.....	27,808 .....	24			
<i>Also *Strood Rural</i>					
Herne Bay .....	14,505 .....	12			
<i>Also *Blean Rural</i>					
Hythe .....	19,162 .....	8	{ This joint hospital has been taken over by the military authorities, and the district councils are negotiating with the object of arranging for the treatment of small-pox cases in one of the neighbouring hospitals.		
Cheriton Urban .....					
Elham Rural .....					
Lydd .....	<i>See New Romney</i>				
Maidstone.....	32,128 .....		No accommodation available Plans for the erection of a hospital are in hand and have been for many months.		
Margate .....	<i>See Broadstairs</i>				

C

*Small-pox Hospitals.*

District.	Population Served.	No. of Beds.	Remarks.
Milton Regis .....	47,961 .....	16	Joint Hospital capable of large extension
Sittingbourne .....			
Milton Rural .....			
Also *Queenborough *Sheerness			
New Romney .....	6,286 .....	12	Joint Hospital.
Romney Marsh .....			
Lydd.....			
Northfleet .....	14,756 .....	6	
Penge .....	22,218 .....	89	Joint Hospital with Croydon and Wimbledon
*Queenborough .....	See Milton Regis		
Ramsgate .....	See Broadstairs		
Rochester .....	See Chatham		
Sandgate .....	1,723 .....	8	
*Sandwich .....	See Eastry Rural		
*Sevenoaks .....	See Southborough		
*Sheerness .....	See Milton Regis		
Sittingbourne .....	See Milton Regis		
Southborough .....	103,119 .....	24	Joint Hospital, capable of large extension
Tonbridge Urban .....			
Tonbridge Rural .....			
Tunbridge Wells....			
Also *Sevenoaks Urban *Sevenoaks Rural			
*Tenterden Borough .....	See Hollingbourn		Capable of large extension
Tonbridge.....	See Southborough		
Tunbridge Wells .....	See Southborough		
*Walmer.....	See Eastry Rural		
Whitstable .....	8,162 .....	12	Capable of large extension.
Wrotham .....	4,094 .....	16	

*Rural Districts :—*

Ashford, East .....	13,925 .....	6	
Ashford, West.....	21,653 .....	12	
Also *Ashford Urban			

## Small-pox Hospitals.

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District,	Population Served.	No. of Beds.	Remarks.
* Blean.....	<i>See Herne Bay</i>		
* Bridge .....	<i>See Eastry</i>		
Bromley .....	<i>See Beckenham</i>		
* Cranbrook.. ...	<i>See Hollingbourn</i>		
Dartford .....	39,870 .....	? Arrangement with M.A. B.	
* Dover.....	<i>See Dover Borough</i>		
Eastry .....	} 39,491 .....	30	
Also * Deal Borough			
* Sandwich			
* Walmer			
* Bridge Rural			
Elham .....	<i>See Hythe</i>		
Faversham .....	} 25,746 .....	4	This accommodation is very small for the population concerned
Also * Faversham Borough			
Hollingbourn .....	} 50,633 .....	22	
Also * Tenterden Borough			
* Maidstone Rural			
* Cranbrook ,,			
* Tenterden ,,			
* Hoo ...	<i>See Chatham</i>		
* Maidstone.....	<i>See Hollingbourn</i>		
Malling.....	23,463 .....	10	
Milton .....	<i>See Milton Regis</i>		
Romney Marsh .....	<i>See New Romney</i>		
* Sevenoaks .....	<i>See Southborough</i>		
† Sheppey .....	4,231 .....	8	
* Strood .....	<i>See Gravesend..</i> ...		Also additional arrangement with Port of London Authority
* Tenterden..	<i>See Hollingbourn</i>		
Thanet, Isle of.....	<i>See Broadstairs</i>		
Tonbridge .....	<i>See Southborough</i>		

\*These districts do not possess their own small-pox hospital, but have made arrangements with other districts as shown.

†This is the general isolation hospital, which, in the event of small-pox occurring, would be emptied and disinfected immediately.



NOTIFIABLE DISEASES.

The county death-rates from the chief notifiable ailments are set out on page 29, but these rates do not give an accurate idea of the prevalence of these diseases. To bring out this latter fact more clearly, and to render the information obtained from the reports available for purposes of comparison, table 8 has been prepared, which indicates the rates of attack of diphtheria, scarlet fever, and enteric fever, per 1,000 of the civil population in the different districts.

As regards the county as a whole, it will be noticed that 1·64 per 1,000 of the inhabitants suffered from diphtheria, 1·93 from scarlet fever, and 0·22 from enteric fever, compared with 2·17, 2·91 and 0·23 respectively in the previous year. It will thus be seen that the attack-rates in the year under review show a considerable decrease. The incidence in urban districts was greater than in rural.

Certain points respecting these different diseases require separate mention.

SMALL-POX.—Numbers of cases notified, and mortality, during the past nine years :—

Year.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	
									Kent.	England and Wales.
Cases notified	15	0	2	27	3	1	2	2	0	149
Death-rate ...	0·00	<i>nil</i>	0·00	0·00	<i>nil</i>	<i>nil</i>	0·00	<i>nil</i>	<i>nil</i>	0·00

SCARLET FEVER.—Number of cases notified, and rates of mortality, during the past ten years :—

Year	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	
										Kent.	England and Wales.
Cases notified	3116	2847	2649	2033	2330	3141	2408	3784	2862	1856	75722
Death-rate	0·08	0·05	0·04	0·03	0·02	0·03	0·03	0·04	0·04	0·03	0·04

The district reports contain practically no references of interest in connection with scarlet fever, probably due to the fact that the disease showed its lowest incidence for many years, as will be noted from the above table. Although military cases are excluded from the figures, they may be regarded as very satisfactory.

I append one extract from a district report :—

*Queenborough.*—“I think we have every reason to hope that during next year we shall be more or less free from scarlet fever, through the magnificent provision made by the Bottle Works Company for their employees, as I have no doubt that the majority of cases were imported by boys from the east end of London, who were billeted in the different houses, but in future they will be lodged and fed in the Boys’ Home. This home is admirably arranged and is up-to-date as regards hygienic fittings, such as hot and cold baths, latrines, and a good system of ventilation. It also has a well fitted up observation ward, and in fact has everything that can be desired.”

DIPHTHERIA.—Numbers of cases notified, and rates of mortality, during the past ten years :—

Year.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	
										Kent.	Eng-land and Wales
Cases Notified.	1036	1212	1225	928	1392	2008	1738	2631	2136	1581	51707
Death Rate.	0·11	0·12	0·14	0·07	0·11	0·16	0·10	0·17	0·16	0·14	0·14

The figures for 1916 do not include cases occurring among the military and naval units stationed in the county, but I think it can be taken that diphtheria was considerably less prevalent than in recent years.

The following observations of interest are extracted from the reports of the district medical officers of health :—

*New Romney.*—“In March two cases of diphtheria were notified and removed to hospital. A pet rabbit died at the house, and a swab taken from its throat proved it to have had the disease. A dog died a short time previously with an undiagnosed disease, but I did not see this.



TABLE 6.—Shewing the Number of Cases of Infectious Disease among the Civil Population notified in each of the **Urban Districts** in the County of Kent, and the Number of such Cases which were treated in Hospital, during the year 1916.

DISTRICT.	Small-pox.	Diphtheria including Membranous Croup.	Erysipelas.	Fevers.			Cerebro-spinal Meningitis.	Polio-myelitis.	Ophthalmia Neonatorum.	Pulmonary Tuberculosis.	Other forms of Tuberculosis.	Measles & Rubella.	Cases removed to Hospital.						
				Scarlet.	Enteric.	Puerperal.							Small pox.	Diphtheria.	Scarlet Fever.	Enteric Fever.	Cerebro-spinal Meningitis.	Pulmonary Tuberculosis.	Other forms of Tuberculosis.
Ashford ...	...	27	1	32	3	...	..	2	...	15	3	122	...	27	32	3	...	...	...
Beckenham ...	...	10	9	56	7	...	2	...	4	40	12	580	...	5	36	4	1	...	...
Bexley ...	...	19	10	127	1	1	1	...	1	38	...	443	...	4	104	...	...	...	...
Broadstairs & St. Peter's...	...	30	8	26	1	...	...	...	...	15	6	41	...	28	22	3	...	...	...
Bromley (Borough)...	...	46	20	27	1	3	2	...	4	36	8	510	...	34	24	1	1	...	...
Chatham (Borough)...	...	76	9	88	17	...	22	1	22	79	16	605	...	59	70	14	19	...	...
Cheriton ...	...	8	4	34	...	1	...	...	2	14	7	30	...	...	34	...	...	...	...
Chislehurst ...	...	6	7	9	1	...	...	...	1	9	...	281	...	4	8	...	...	...	...
Dartford ...	...	17	11	86	7	...	...	...	1	30	2	361	...	17	85	...	...	...	...
Deal (Borough) ...	...	3	...	16	1	...	...	...	...	12	...	51	...	...	16	...	...	...	...
Dover (Borough)...	...	46	14	107	5	2	2	1	14	44	10	63	...	34	74	4	2	..	..
Erith ...	...	118	11	182	4	..	...	...	4	50	9	111	..	98	148	4	...	...	...
Faversham (Borough)...	...	22	10	20	6	...	1	...	4	12	2	13	...	19	18	5	...	7	1
Folkestone (Borough)...	...	59	22	66	1	4	4	2	15	37	10	590	...	62	55	1	2	..	...
Footscray ...	...	23	6	6	...	...	...	...	...	7	2	152	...	23	3	...	...	...	...
Gillingham (Borough)...	...	43	19	98	8	2	14	1	10	90	21	476	...	29	67	6	12	...	...
Gravesend (Borough)...	...	65	20	44	4	1	3	1	4	42	14	359	...	25	24	2	3	...	...
Herne Bay ...	...	14	4	11	...	..	1	1	2	12	2	23	...	11	11	...	1	...	...
Hythe (Borough)...	...	14	2	22	...	2	...	...	...	9	...	120	...	2	3	...	...	...	...
Lydd (Borough)...	...	...	2	...	...	...	...	...	1	4	...	63	..	...	..	...	...	...	...
Maidstone (Borough)...	...	25	28	30	37	1	1	...	7	82	9	74	...	25	29	29	1	...	..
Margate (Borough)...	...	32	10	46	4	...	...	...	2	59	30	275	...	30	38	2	...	...	...
Milton Regis ...	...	20	6	2	...	1	2	...	...	21	2	11	...	17	1	...	2	...	...
New Romney (Borough)...	...	2	1	..	...	...	...	...	2	2	1	79	...	2	1	...	...	...	...
Northfleet ..	...	29	8	22	7	...	...	...	3	20	13	429	...	...	...	1	...	...	...
Penge ...	...	28	7	30	1	...	1	...	3	42	9	241	...	19	26	1	1	17	8
Queenborough (Borough)...	...	28	7	50	1	...	...	...	...	4	3	12	...	14	35	1	...	...	...
Ramsgate (Borough)...	...	34	27	14	2	1	...	...	1	46	31	87	...	27	8	...	...	..	...
Rochester (City) ..	...	78	14	45	18	1	5	...	5	55	20	211	...	48	38	8	4	...	...
Sandgate...	...	...	1	2	...	...	...	...	...	1	...	1	...	...	2	...	...	...	...
Sandwich (Borough)...	...	...	...	2	...	...	...	...	...	5	3	...	...	...	2	...	...	...	...
Sevenoaks ..	...	11	...	4	..	...	...	...	...	14	4	43	...	6	3	...	1	...	...
Sheerness ...	...	45	9	31	24	2	1	...	1	37	7	38	...	40	29	17	...	...	...
Sittingbourne ...	...	59	4	8	...	1	3	...	...	9	1	36	...	58	6	...	1	...	...
Southborough ...	...	9	4	3	1	...	..	1	...	10	6	39	...	7	3	1	...	...	...
Tenterden (Borough)...	...	...	1	3	...	...	...	...	..	7	...	11	...	...	...	...	...	...	...
Tonbridge ...	...	33	5	13	3	...	...	1	..	40	6	101	...	...	...	..	...	...	...
Tunbridge Wells (Borough)...	...	50	11	12	4	2	...	...	6	45	16	276	...	49	11	4	...	5	...
Walmer ...	...	3	...	8	...	...	...	...	...	7	1	21	...	2	8	...	...	...	...
Whitstable ...	...	23	4	7	2	...	1	...	...	10	4	28	...	4	4	2	...	...	...
Wrotham ...	...	7	...	4	...	...	1	1	...	2	2	3	...	...	2	...	...	...	...
TOTAL URBAN...	...	1162	336	1393	171	25	68	11	121	1113	292	7010	...	829	1080	113	51	29	9



TABLE. 7.—Shewing the number of Cases of Infectious Disease among the Civil Population notified in each of the **Rural Districts** in the County of Kent, and the Number of such Cases which were treated in Hospital, during the year 1916.

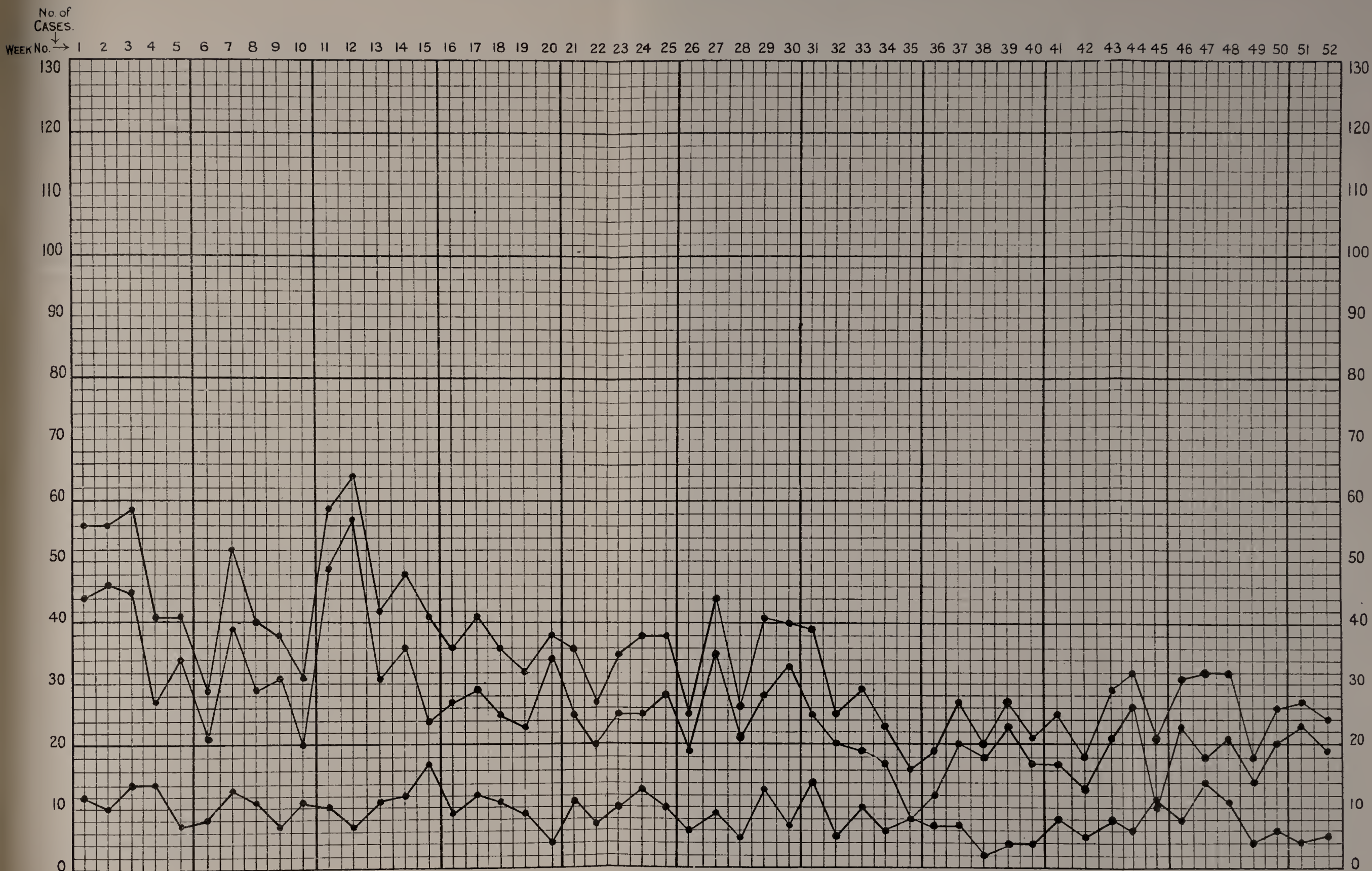
DISTRICT.		Small-pox.	Diphtheria including Membranous Croup	Erysipelas.	Fevers.			Cerebro-spinal Meningitis	Polio-myelitis.	Ophthalmia Neonatorum.	Pulmonary Tuberculosis.	Other forms of Tuberculosis.	Measles & Rubella.	Cases removed to Hospital.							
					Scarlet.	Enteric.	Puerperal.							Small-pox.	Diphtheria.	Scarlet Fever.	Enteric Fever.	Cerebro-spinal Meningitis.	Pulmonary Tuberculosis.	Other forms of Tuberculosis.	Others.
Ashford, East	...	...	14	4	17	1	1	...	...	2	10	2	162	...	11	17	...	...	...	...	...
Ashford, West	...	...	6	...	11	...	...	1	...	...	14	3	17	...	...	5	...	...	...	...	...
Blean	...	...	11	3	2	1	...	...	...	1	10	2	19	...	8	1	...	...	...	...	...
Bridge	..	...	16	5	14	...	...	...	...	1	5	...	107	...	15	14	...	...	...	...	..
Bromley	...	...	16	25	21	3	1	1	1	1	41	17	239	...	15	18	...	...	...	...	...
Cranbrook	...	...	24	6	12	1	...	...	..	...	13	6	35	...	...	6	1	...	...	...	...
Dartford	...	...	53	20	109	7	...	2	...	5	68	20	683	...	43	80	5	...	21	8	...
Dover	...	...	4	...	14	...	...	...	...	...	6	...	48	...	2	9	...	...	...	...	...
Eastry	..	...	8	7	15	1	...	...	...	...	20	1	127	...	1	9	1	...	...	...	...
Elham	...	...	1	3	13	1	...	...	...	...	6	...	139	...	...	9	1	...	...	...	2
Faversham	...	...	67	4	50	3	...	...	...	...	18	6	7	...	66	47	1	...	...	...	3
Hollingbourn	...	...	7	4	14	...	...	...	...	...	20	...	53	...	2	4	...	...	...	...	...
Hoo	...	...	2	...	1	...	...	...	...	1	6	1	2	...	...	1	...	...	...	...	2
Maidstone	...	...	16	5	16	...	...	..	1	...	20	4	134	...	14	13	...	...	...	...	...
Malling	...	...	21	12	63	1	1	1	...	...	57	5	398	...	13	60	...	1	...	...	..
Milton	...	..	45	6	18	5	1	2	...	2	18	3	38	...	44	18	4	2	...	...	...
Romney Marsh	...	...	1	...	2	...	...	...	1	...	1	...	52	...	1	2	...	...	...	...	...
Sevenoaks	...	...	56	7	22	...	...	...	...	1	41	9	34	...	46	27	...	...	..	...	...
Sheppey	...	...	9	3	2	...	...	...	...	1	2	...	54	..	5	1	...	...	...	...	...
Strood	...	...	14	3	7	4	1	...	...	2	19	4	466	..	7	4	2	.	..	...	...
Tenterden	...	...	7	2	...	1	...	...	...	...	6	...	7	...	...	...	...	..	...	...	...
Thanet	...	...	4	5	14	4	...	...	...	2	10	2	416	...	1	8	2	...	...	...	...
Tonbridge	...	...	17	7	26	6	...	...	...	5	30	6	102	...	15	29	6	...	..	...	..
Total in Rural Districts	...	...	419	131	463	39	5	7	3	24	441	91	3339	...	309	382	23	3	21	8	7
Total in Urban Districts	...	..	1162	336	1393	171	25	68	11	121	1113	292	7010	...	829	1080	113	51	29	9	14
Total for County	...	...	1581	467	1856	210	30	75	14	145	1554	383	10349	...	1138	1462	136	54	50	17	21

TABLE 8.—Incidence per 1,000 of population of notified cases of Scarlet Fever, Diphtheria, and Enteric Fever (excluding Naval and Military cases).

URBAN.				RURAL.			
District.	Diphtheria.	Scarlet Fever.	Enteric Fever.	District.	Diphtheria.	Scarlet Fever.	Enteric Fever.
Ashford ... ..	1·95	2·31	0·22	Ashford, East ...	1·04	1·26	0·08
Beckenham ... ..	0·33	1·82	0·23	Ashford, West ...	0·87	1·59	Nil
Bexley ... ..	1·02	6·80	0·06	Blean... ..	1·58	0·29	0·15
Broadstairs and St. Peter's ... ..	3·34	2·90	0·12	Bridge ... ..	1·80	1·58	Nil
Bromley (Borough)...	1·43	0·84	0·04	Bromley ... ..	0·72	0·95	0·14
Chatham (Borough)...	2·00	2·32	0·45	Cranbrook ... ..	1·99	1·00	0·09
Cheriton ... ..	1·55	6·59	Nil	Dartford ... ..	1·31	2·69	0·18
Chislehurst ... ..	0·73	1·21	0·13	Dover ... ..	0·56	1·96	Nil
Dartford ... ..	0·78	3·95	0·33	Eastry ... ..	0·65	1·22	0·09
Deal (Borough) ...	0·30	1·58	0·10	Elham ... ..	0·14	1·78	0·14
Dover (Borough) ...	1·19	2·76	0·13	Faversham ... ..	4·79	3·53	0·22
Erith ... ..	3·38	5·17	0·12	Hollingbourn ...	0·59	1·17	Nil
Faversham (Borough)	1·92	1·75	0·53	Hoo .. ...	0·51	0·26	Nil
Folkestone (Borough)	1·74	1·95	0·03	Maidstone ... ..	1·06	1·06	Nil
Footseray ... ..	2·68	0·70	Nil	Malling ... ..	0·94	2·81	0·05
Gillingham (Borough)	0·98	2·23	0·19	Milton ... ..	3·66	1·47	0·41
Gravesend (Borough)	2·39	1·62	0·15	Romney Marsh ...	0·39	0·75	Nil
Herne Bay ... ..	1·99	1·56	Nil	Sevenoaks . . .	2·69	1·21	Nil
Hythe (Borough) ...	2·06	3·23	Nil	Sheppey ... ..	2·12	0·48	Nil
Lydd (Borough) ..	Nil	Nil	Nil	Strood ... ..	0·94	0·47	0·27
Maidstone (Borough)	0·81	0·97	1·20	Tenterden ... ..	1·33	Nil	0·19
Margate (Borough)...	1·29	1·85	0·17	Thanet ... ..	0·45	1·56	0·45
Milton Regis ... ..	2·96	0·30	Nil	Tonbridge ... ..	1·04	1·59	0·37
New Romney (Boro')	1·68	Nil	Nil	<b>VARIOUS.</b>			
Northfleet ... ..	2·03	1·54	0·49	Urban Districts ..	1·74	2·08	0·26
Penge ... ..	1·27	1·36	0·05	Rural Districts ...	1·43	1·58	0·14
Queenborough (Boro')	9·20	16·42	0·33	Whole County ...	1·64	1·93	0·22
Ramsgate (Borough)	1·38	0·53	0·09				
Rochester (City) ..	2·58	1·49	0·60	Aggregate of Eng- lish Administrative Counties }	1·41	2·12	0·17
Sandgate ... ..	Nil	1·10	Nil	Urban Districts (less County Boroughs) }	1·53	2·21	0·17
Sandwich (Borough)	Nil	0·72	0·36	England }	1·30	2·32	0·14
Sevenoaks ... ..	1·31	0·96	0·12	Rural Districts, Eng- land }	1·50	2·19	0·16
Sheerness ... ..	2·72	1·87	1·45	England and Wales			
Sittingbourne ... ..	7·21	0·98	Nil				
Southborough ... ..	1·42	0·48	0·16				
Tenterden (Borough)	Nil	0·99	Nil				
Tonbridge ... ..	2·43	1·11	0·23				
Tunbridge Wells (Borough)...	1·55	0·35	0·13				
Walmer ... ..	0·79	2·10	Nil				
Whitstable ... ..	2·89	0·88	0·26				
Wrotham ... ..	1·78	1·02	Nil				



# WEEKLY NOTIFICATIONS OF SCARLET FEVER.



*The TOP line shews the number of cases notified each week in the whole of the County.*

*The MIDDLE line shews the number of cases notified each week in the Urban Districts of the County.*

*The BOTTOM line shews the number of cases notified each week in the Rural Districts of the County.*





“I wrote to the County Medical Officer pointing out that diphtheria did not occur at all frequently in New Romney before August, 1914, when, apparently, it was brought from a school in London. Since this time, however, we have had two cases every six months, and I suggested that I should take swabs from the school children.

“This was done. I took a swab from the throat of every child in the school, 211 in number, and they were sent for cultivation; twenty-six proved to be “carriers” of the germ. These were all, except one, removed to the isolation hospital, and kept there till they gave two negative cultivations. Later Dr. Greenwood sent down the school nurse, who went over the school again.

“It is a question whether this swabbing should not be repeated, as it is common knowledge that many children carry the germ in their throats and are infectious, though they have not the disease, and so long as they are untreated epidemics will occur.”

*Bromley Rural.*—“In March I received an advice that the Joint Hospital Board of the Bromley and Beckenham Hospital had ordered the discharge of a patient who was admitted to their hospital from the workhouse, Farnborough, where she was a ward maid, on April 5th, 1915, and had remained under treatment there until March, 1916. Between eighty and ninety swabs were taken, but the results obtained would not admit of her being discharged. Later, tests for virulence were made at the Kent County Laboratory, and it was found that though the throat was not clear, the organisms were not virulent. A week later I received information that two swabs, sent to different laboratories, were reported negative, and I agreed to the patient resuming employment, but advised her not to go where there were children.

“The second case showed even greater persistency, and was a girl who was first notified from the workhouse on January 22nd, 1914, and was believed to be the source of infection in the persistent outbreak of diphtheria at the workhouse, Farnborough, during that year, as on each occasion that the girl was discharged from the isolation hospital, a further outbreak of diphtheria occurred among the children of the workhouse. About May, 1916, this girl was sent to a situation at Beckenham, where she remained until July, when she returned to the workhouse with “sore throat,” and, although a swab gave a negative result, was retained there until the middle of October, when, as a precautionary measure prior to her going to another situation, a second swab was taken, which was positive, and she was admitted to the isolation hospital again.

“As the constant isolation was having a very injurious effect on the girl's mental balance, the Guardians and the Rural District Council conferred together to consider the advisability of consulting the Medical Officer of the Local Government Board with a view to obtaining his advice on the matter, and a meeting was arranged, but in the interval it was found possible to place the girl in service in a situation where she would be under the supervision of the medical officer to the workhouse.”

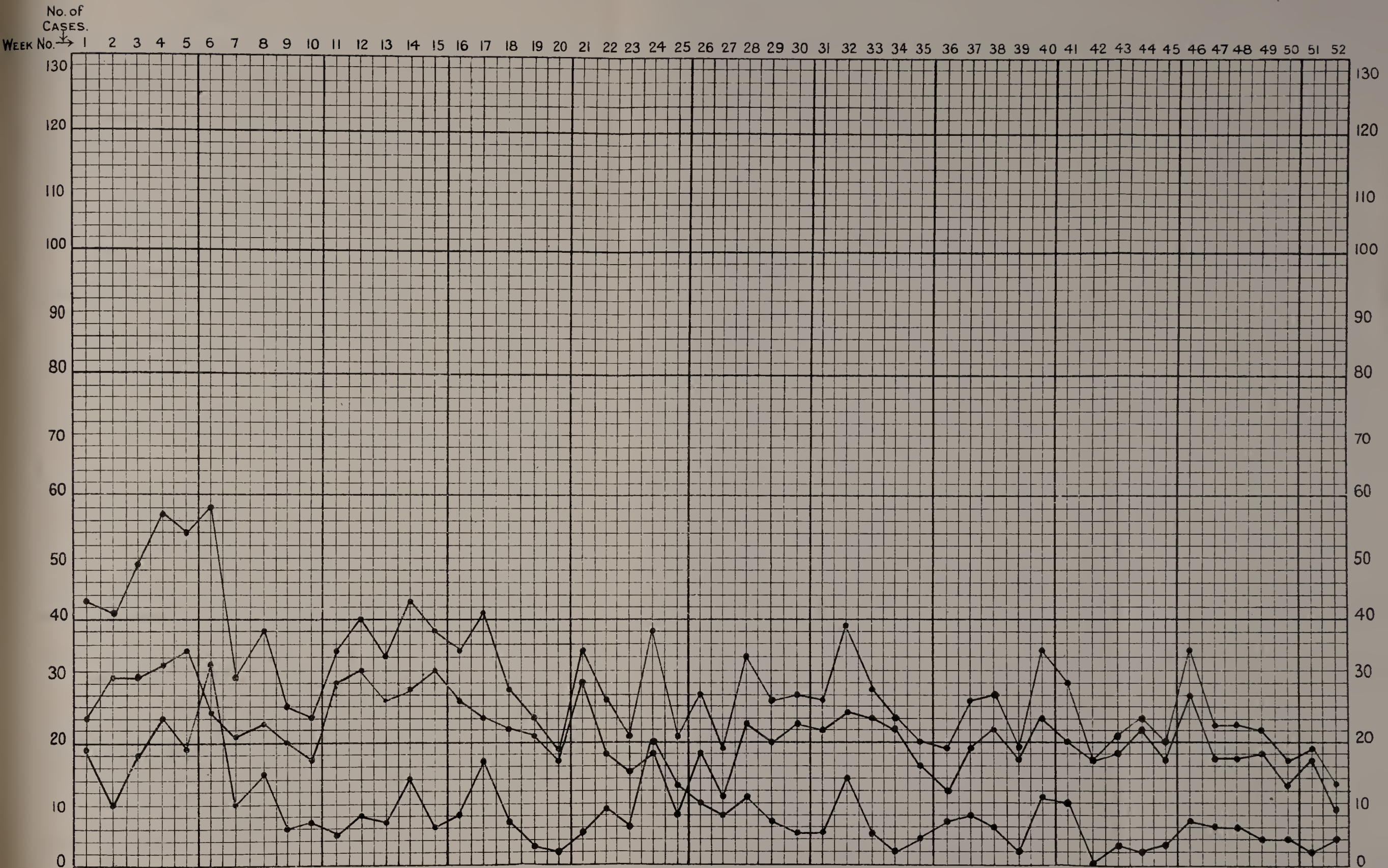
*Cranbrook Rural.*—“A considerable outbreak of diphtheria occurred in the Cranbrook Rural District during 1916. There have been two epidemics—one at Sandhurst and one at Cranbrook. The former began at the end of May, was wide-spread—though fortunately owing to the measures adopted, of a mild character, and persisted until almost the close of the year, and appears to have originated through several Sandhurst children having been in contact with an unsuspected ‘carrier’—one of the Wittersham cases. At the middle of May, attention was directed by the medical attendant to three children attending Sandhurst school, who were stated to have ‘diphtheritic throats,’ and I suggested that, as a matter of precaution, swabs should be taken and sent to the county laboratory for bacteriological examination; on referring the matter to the medical attendant, however, he appeared to consider this course unnecessary, and that the precautions being observed were sufficient. On May 23rd I was informed that there was an epidemic of ‘sore throats’ among the children attending this school. I immediately visited the school and took a number of swabs, three of which gave positive results, and as I suspected that in addition to a small number of clinical cases there were ‘carriers’ among the children having ‘slight sore throat,’ I communicated with the Chairman of the Council, suggesting that the most effective way of dealing with the matter was to engage a nurse to reside temporarily in the village to swab and treat the children who were bacteriological cases, the children having clinical symptoms being admitted to the isolation hospital, and on his agreeing to this course of action, I engaged one nurse to work in the village, and a second to nurse at the hospital.

“On May 31st, on my representation, Dr. A. Greenwood, the School Medical Officer, agreed to close Sandhurst school for a fortnight; on June 17th, I wrote asking for an extension to July 3rd, which was given, and on two subsequent occasions an extension of closure was given, bringing the date to July 31st, the nurse meanwhile swabbing and treating the children as arranged. On July 31st, the school medical inspector visited the school and swabbed about one hundred of the children, and on his advice the school was again closed.

“At the end of August the question of allowing school children to work in the hop-fields had to be considered and recognising the futility of prevent-



# WEEKLY NOTIFICATIONS OF DIPHTHERIA.



*The TOP line shews the number of cases notified each week in the whole of the County.*

*The MIDDLE line shews the number of cases notified each week in the Urban Districts of the County.*

*The BOTTOM line shews the number of cases notified each week in the Rural Districts of the County.*





ing their doing so, I advocated that the children who were bacteriological cases should meet each morning, so that the nurse might treat their throats prior to their going to the hop-gardens.

“By the end of September only sixteen children required treatment in the village and two cases in hospital, and the school re-opened on October 9th, thorough disinfection and limewashing having been carried out meanwhile. Both the school medical inspector and myself visited the school on re-opening and took numerous swabs; the positive cases were excluded, the nurse remaining in the village for some weeks to attend to them, and by the end of the year the epidemic was well in hand.

“Although close upon 1,000 swabs were taken and submitted for bacteriological examination in connection with this outbreak, and related to about 220 children, only twenty-four of the cases were clinical, and there were no deaths nor any cases left with serious after-effects.

ENTERIC FEVER.—Numbers of cases notified, and rates of mortality during the past ten years :—

Year.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	
										Kent.	England and Wales.
Cases Notified	443	493	323	292	334	362	197	270	221	210	5,646
Death Rate.	0·09	0·07	0·05	0·04	0·05	0·05	0·03	0·05	0·04	0·04	0·03

The above figures for 1916 relate to cases occurring among the civil population only.

The following are extracts from the district reports :—

*Ramsgate.*—“The municipal shell-fish station was not used during 1916. In September of 1915 a large amount of crude paraffin found its way into Pegwell Bay, the result of an accident to a shipping vessel. Evidently the cockles were destroyed, as throughout the fishing season they were found to be very small and very few, and there was practically no fishing. Since 1892 the number of cases of typhoid fever has never reached so low a figure.”

*Sheerness.*—“An investigation into the cause of the outbreak of enteric fever was conducted by Dr. Macewen, of the Local Government Board, and



Dr. W. M. Scott, your late Deputy Medical Officer of Health, and it was found that after very careful consideration of all possible causes, local contamination of drinking water owing to soakage with sewage round the water service pipes and mains was the most probable source.

“Definite proof of this theory in the majority of cases notified was found by the location of leaking water service pipes within a few inches of broken drains. The discovery of unjointed sewers with sewage contaminated earth surrounding was common.

“Bacteriological analysis of water from scullery taps of the houses concerned was made, and in six cases out of nine definite contamination was detected.

“The direct cause of the outbreak was probably the flooding of the sewers and drains of the town, as a sequence to a violent rainstorm which occurred on August 27th, the effect of which was aggravated by the silting up of the main sewer in the New Road and by accumulation of solid matter in sewers and drains throughout the town.

“Energetic measures were at once taken by the council to prevent a recurrence, and with the advent of the new surveyor and civil engineer, it is hoped that the new scheme for the renovation of the town’s sewerage will be commenced in order that on the termination of hostilities it may be ready for commencement in practical earnestness.”

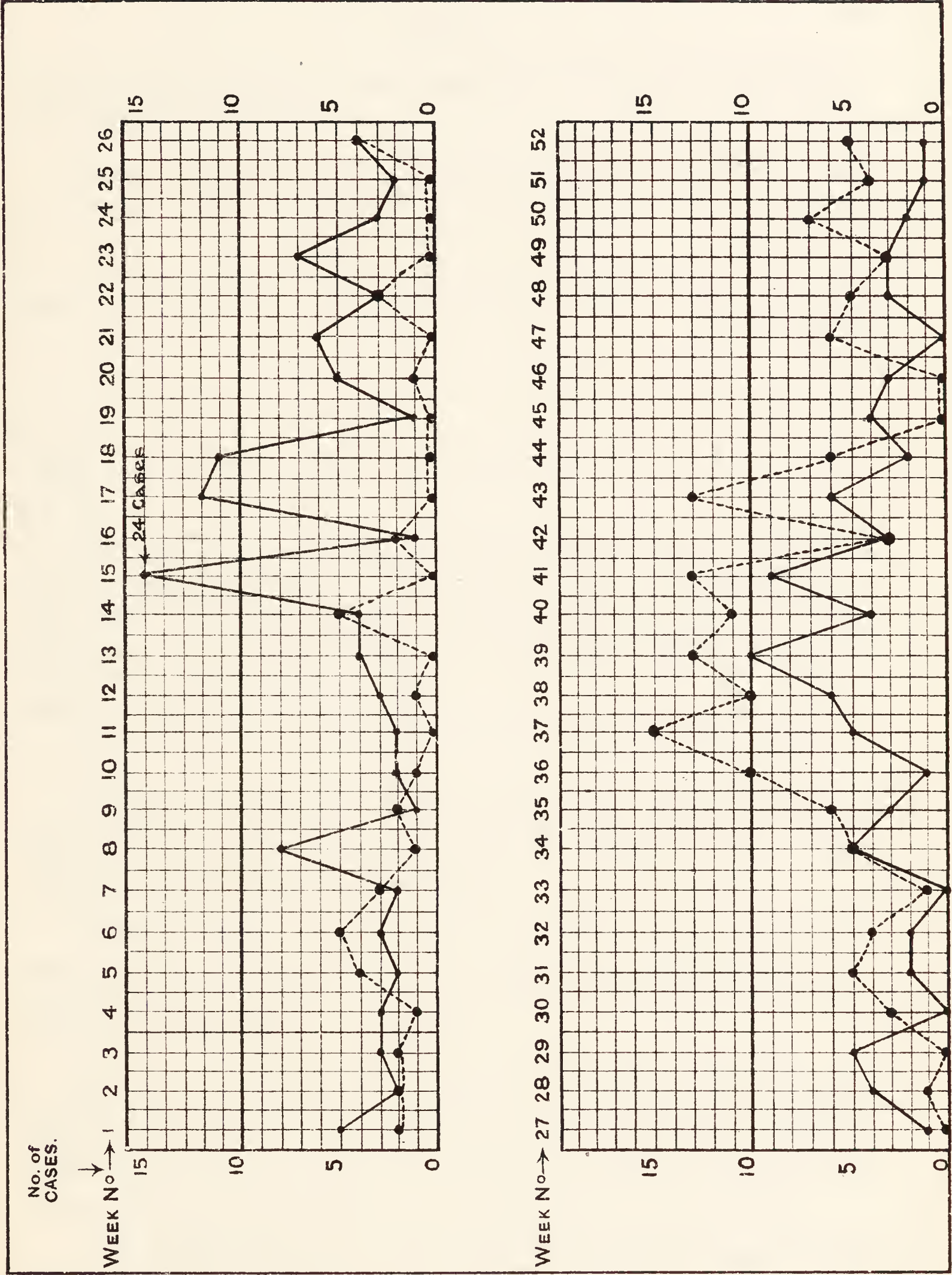
*Romney Marsh.*—“In September it was reported that a family who had been staying at Dymchurch was suffering from enteric fever. I made enquiries and found that the water on chemical analysis showed signs of organic pollution. I advised the landlord to have all water boiled before use. As there is no safe drinking water in Dymchurch, this was all that could be done ; several other families had stayed in the house, but none of them suffered from any disease. The persons who had the enteric were living in a town where there were other cases of the disease.”

#### OYSTERS.

During the year under review I have kept in close touch with the Fisheries Department of Fishmongers’ Hall concerning the connection between oysters and typhoid fever, and have visited several oyster grounds in the county on many occasions, especially in the Faversham district. Oysters in the vicinity of Elmley Ferry were found unfit for human consumption, and the ferryman was warned against selling any oysters from this part of the shore, unless they had been relaid for cleansing.

Also the sewage works at Milton and Sittingbourne were visited. Where the effluent from the works was found to be unsatisfactory after analysis,

WEEKLY NOTIFICATIONS OF ENTERIC FEVER.



The dotted line indicates the weekly incidence in 1916, and the continuous line the incidence in 1915.





suitable recommendations in the management of filter beds were made to the authorities concerned.

MEASLES.—Mortality from measles during the past ten years :—

Year.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	
										Kent.	England and Wales.
Rate per 1,000	0·28	0·12	0·07	0·08	0·36	0·10	0·16	0·08	0·19	0·08	0·15

An Order of the Local Government Board making compulsory the notification of measles and rubella (german measles) came into force on January 1st, 1916. The number of cases notified among the civil population of Kent during the year was 10,349, with a sickness rate of 10·62 per thousand of the civil population, and the number notified in England and Wales was 348,090, with a sickness rate of 10·09.

The following two extracts from the district reports are of interest :—

*Chatham.*—“Generally speaking, the effect of notification has been to secure greater care in the home nursing of measles. In future outbreaks much benefit will be derived by the provision of adequate nursing, which is within the power of the sanitary authority.

“Besides the 605 notified cases, there was a large number of secondary cases, and the small number of deaths recorded does not indicate neglect. It is also satisfactory to note that in at least eighty-five per cent. of the known cases a medical practitioner was called in.”

*Margate.*—“There were 294 cases of measles notified, principally during the first three months, which was practically a continuation of the epidemic of the autumn of 1915. The Health Committee engaged the services of a special nurse for three months, who visited all the cases in the poorer class homes and gave practical help in the nursing and care of the children.

“The appointment of a nurse is highly commendable, and undoubtedly was the means of preventing complications and probably death in many instances.

“There were five deaths directly attributable to measles.”

TUBERCULOUS DISEASES.—The valuable work referred to in my last annual health report has been continued energetically during the year 1916.

A full account of this work has appeared in a special report on Tuberculosis and the Administration of Sanatorium Benefit in Kent already presented to you.

The following statistical information is of interest :—

Number of cases of phthisis and other tuberculous diseases, and mortality, during the past nine years :—

Year.		1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	
										Kent.	England and Wales.
Phthisis	C a s e s Notified	—	—	—	—	2501	1936	1744	1448	1554	72479
	Death-rate	0·84	0·78	0·78	0·87	0·88	0·81	0·86	0·96	0·99	Not available
Other Tuberculous Diseases.	C a s e s Notified	—	—	—	—	—	931	525	446	383	23,777
	Death-rate	0·35	0·31	0·28	0·33	0·30	0·31	0·28	0·37	0·29	Not available

(The mortality rates for tuberculosis are calculated on the *total*, and not the *civilian*, population. Military deaths are seldom recorded from this cause, as any soldier found to be so suffering is discharged from the army).

741 of the deaths from phthisis were recorded in urban districts and 293 in rural, the mortality rates being 1·02 and 0·92 respectively.

As regards other tuberculous diseases, 216 deaths occurred in urban and 81 in rural areas, the corresponding rates being 0·30 and 0·26.

The subjoined table gives a summary of the cases notified from January 2nd, 1916, to January 1st, 1917, and the second table shews the number of notified cases and deaths in 1916 and the average deaths during the five years 1911-1915, both of cases of pulmonary and other forms of tuberculosis, in the various districts in the county.

It will be seen from Table 10, that the total number of cases notified during 1916 was 1937, and the total number of deaths was 1331, so that the ratio of notifications to deaths was approximately three to two. The ratio for 1915 was three to two, for 1914 two to one and for 1913 five to two.

TABLE 9.

## PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.

TABLE 9.—Summary of Notifications during the period from the 2nd January, 1916, to January 1st, 1917,  
in the County of Kent.

AGE PERIODS.	Notifications on Form A.											Notifications on Form B.				Number of Notifications on Form C.					
	Number of Primary Notifications.											Total Notifications on Form A.				Number of Primary Notifications.			Total Notifications on Form B.	Poor Law Institutions.	Sanatoria.
0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards.	Total Primary Notifications.	Under 5	5 to 10	10 to 15	Total Primary Notifications.						
Pulmonary Males...	2	8	30	32	75	108	220	183	91	45	24	818	—	3	4	7	7	22	116		
Females ...	3	7	25	31	56	95	193	91	45	26	11	583	—	3	4	7	7	13	86		
Non-pulmonary Males ...	5	32	35	21	11	6	14	11	6	1	1	143	1	3	6	10	10	—	7		
Females	7	22	27	21	22	22	19	11	3	2	3	159	—	6	3	9	9	2	9		

NOTE.—FORM A is the form of notification to be used by every Medical Practitioner (except a School Medical Inspector) for cases not previously notified.

FORM B is the form of notification to be used by School Medical Inspectors for cases not previously notified by them.

FORM C is the form of notification to be used by Medical Officers of Poor Law Institutions and Sanatoria, for cases which have been notified before admission (Cases not notified before admission are reported on Form A.)



The district reports contain very few observations relating to tuberculosis, and I only append one extract:—

*Chatham.*—"The prevention of disease is the object to be attained, and this needs long and patient work in the improvement of home conditions, factories and workshops, in the early recognition of disease, especially in children, in the provision of accommodation for the treatment of advanced cases and in the education of the public respecting the value of fresh air and proper ventilation, and of all measures calculated to maintain physical health.

"The attainment of these conditions will remain difficult without the driving force of strong public opinion."

CEREBRO-SPINAL MENINGITIS.—Seventy-five cases of this disease occurred in Kent during 1916, viz., sixty-eight in urban districts and seven in rural districts.

The facilities of the county bacteriological laboratory have been offered freely to district medical officers of health, in the examination of cerebro-spinal fluid from suspected cases, and of throat swabs from contacts. Full advantage of this offer has been taken in many cases, and during the year thirty-five specimens of cerebro-spinal fluid and one hundred and three swabs from contacts, were examined in the laboratory.

The distribution of the cases among the sanitary areas is set out in tables 6 and 7 of this report, and I append below details of interest as given in the district reports:—

*Chatham.*—

Civil cases notified twenty-two .....	mortality forty-five per cent.
Naval cases notified nineteen .....	„ forty-two „
Military cases notified, one hundred and thirty-four „	seventeen „

"The difference in the rates of mortality amongst the three groups is very marked. The reason is, I think, due to earlier diagnosis and treatment of military cases, many of which would not have been recognised as cerebro-spinal meningitis by symptoms alone, but which were so proved by bacteriological methods. Amongst civil cases there is greater delay in securing medical attendance, many being ill for several days before coming under observation. The importance of early lumbar puncture, and the administration of serum cannot be overestimated. Promptitude greatly enhances the prospects of recovery—delay equally diminishes the chances.

"Judging by the weekly returns of infectious diseases occurring in England and Wales, it would seem that an increased incidence in any one locality is always accompanied by the presence of cases occurring more or less sporadically over a large area.

"In this district the incidence of the disease fell on three classes of the population at different periods and in an unequal degree. Beginning with

TABLE 10.—Number of cases of Tuberculosis notified in each district in Kent under the Public Health (Tuberculosis) Regulations, 1912, during 1916; together with the number of deaths occurring from Tuberculosis and the average figures for five years (1911-1915).

URBAN DISTRICTS.	Total Estimated Popula- tion, 1916.	Notifications, 1916.			Deaths.				RURAL DISTRICTS.	Total Estimated Popula- tion, 1916.	Notifications, 1916.			Deaths.			
		Pulm.	Other.	Total.	Pulmonary.		Other.				Pulm.	Other.	Total.	Pulmonary.		Other.	
					1916.	Average of five years, 1911-15.	1916.	Average of five years, 1911-15.						1916.	Average of five years, 1911-15.	1916.	Average of five years, 1911-15.
Ashford ... ..	15,089	15	3	18	18	10	5	5	Ashford, East ... ..	14,711	10	2	12	11	10	3	2
Beckenham ... ..	33,483	40	12	52	28	19	8	7	Ashford, West ... ..	7,565	14	3	17	10	6	3	2
Bexley ... ..	20,344	38	—	38	17	12	3	7	Blean ... ..	7,619	10	2	12	12	6	1	2
Broadstairs and St. Peter's ... ..	9,782	15	6	21	9	7	3	2	Bridge ... ..	9,681	5	—	5	8	11	2	2
Bromley (Borough)	35,000	36	8	44	41	23	3	8	Bromley ... ..	24,301	41	17	58	26	23	7	6
Chatham (Borough)	41,406	79	16	95	40	61	12	17	Cranbrook ... ..	13,156	13	6	19	10	7	3	1
Cheriton ... ..	5,622	14	7	21	6	7	4	2	Dartford ... ..	44,155	68	20	88	54	33	13	13
Chislehurst... ..	9,015	9	—	9	8	4	2	1	Dover ... ..	7,778	6	—	6	4	5	3	2
Dartford ... ..	23,747	30	2	32	23	16	1	6	Eastry ... ..	13,469	20	1	21	6	13	5	3
Deal (Borough) ..	11,027	12	—	12	9	11	4	5	Elham ... ..	7,975	6	—	6	5	5	2	1
Dover (Borough) ...	42,180	44	10	54	38	44	18	18	Faversham ... ..	15,413	18	6	24	12	14	1	3
Erith ... ..	38,093	50	9	59	26	25	11	8	Hollingbourn ... ..	13,057	20	—	20	9	11	4	3
Faversham(Borough)	12,482	12	2	14	15	9	3	6	Hoo ... ..	4,277	6	1	7	2	2	1	2
Folkestone(Borough)	36,933	37	10	47	30	27	10	11	Maidstone... ..	16,572	20	4	24	20	17	5	8
Footscray ... ..	9,368	7	2	9	10	3	4	2	Malling ... ..	24,398	57	5	62	23	20	6	8
Gillingham (Borough)	47,925	90	21	111	60	48	12	16	Milton ... ..	13,404	18	3	21	4	10	3	1
Gravesend (Borough)	29,705	42	14	56	35	30	9	9	Romney Marsh ... ..	2,861	1	—	1	5	4	1	1
Herne Bay ... ..	7,673	12	2	14	3	10	1	2	Sevenoaks... ..	24,355	41	9	50	28	17	6	6
Hythe (Borough) ...	7,419	9	—	9	8	5	—	2	Sheppey ... ..	4,623	2	—	2	2	3	1	1
Lydd (Borough) ...	2,464	4	—	4	2	2	—	—	Strood ... ..	16,357	19	4	23	15	12	4	4
Maidstone (Borough)	33,879	82	9	91	46	45	11	11	Tenterden... ..	5,770	6	—	6	8	4	—	—
Margate (Borough)	27,154	59	30	89	33	21	9	9	Thanet ... ..	9,791	10	2	12	8	12	5	5
Milton&Regis ... ..	7,358	21	2	23	8	6	4	3	Tonbridge... ..	17,888	30	6	36	11	16	2	6
New Romney (Borough) ... ..	1,299	2	1	3	1	1	—	—	Total in Rural Districts...	319,176	441	91	532	293	261	81	90
Northfleet .. ...	15,599	20	13	33	18	13	6	5	„ Urban „ ... ..	729,949	1,113	292	1,405	741	635	216	230
Penge .. ...	24,137	42	9	51	24	20	5	11									
Queenborough (Borough)... ..	3,314	4	3	7	2	1	1	1									
Ramsgate (Borough)	26,981	46	31	77	34	30	13	9									
Rochester (City) ...	33,002	55	20	75	31	31	9	10									
Sandgate ... ..	1,983	1	—	1	1	1	—	—									
Sandwich (Borough)	3,055	5	3	8	4	2	3	1									
Sevenoaks ... ..	9,149	14	4	18	13	8	6	2									
Sheerness ... ..	18,059	37	7	44	11	16	4	6									
Sittingbourne ..	8,904	9	1	10	12	6	—	2									
Southborough ... ..	6,917	10	6	16	8	7	3	3									
Tenterden (Borough)	3,322	7	—	7	5	4	4	3									
Tonbridge ... ..	14,818	40	6	46	18	11	7	5									
Tunbridge Wells (Borough) ... ..	35,160	45	16	61	27	27	12	9									
Walmer ... ..	4,148	7	1	8	3	1	1	1									
Whitstable ... ..	8,665	10	4	14	12	8	5	3									
Wrotham ... ..	4,289	2	2	4	4	3	—	1									
									Total for County ...	1,049,125	1,554	383	*1,937	1,034	896	297	320

\* This figure does not agree with the total of the cases classified in Table 9, owing to the fact that there is a slight difference in the period under review, and that whilst Table 9 has been drawn up from the figures supplied in the weekly notifications of the district medical officers of health, the “notification” columns in the above tabulation have been filled in from the corrected returns in the district annual reports





1915, the majority of the cases were naval, in 1916 there was an overwhelming preponderance of military cases, whilst in neither year was there any alarming spread amongst civilians. The maximum incidence in each year was in February, March and April, the cases occurring in other months being of a sporadic character.

“The unequal distribution amongst three sections of the population is probably dependent on the conditions under which each was dwelling. The majority of naval ratings not on board ship are housed at the Naval Barracks. Many soldiers were in barracks, forts, and hutments; but a still larger number were in billets, and in this respect were like the civil population. On the whole, the naval accommodation was better than the military, both as regards type of building, ventilation and space per head. In billets with few exceptions, soldiers were not overcrowded, but in some instances of large families, billeting led to overcrowding of the normal inmates. In barracks, huts, etc., there was considerable overcrowding, and owing to the constant arrival of large drafts of recruits this was impossible to avoid.

“February, March and April were very wet months, and these meteorological conditions, leading to closure of windows and blocking of apertures, accentuated the evils of overcrowding by want of ventilation. The foul, still atmosphere provided an ideal condition for the spread of infection, and as these unhygienic circumstances were altered by compulsory ventilation and increased cubic space, so the number of cases declined.

“An inquiry amongst medical men as to the prevalence of influenzal cases, sore throats, bronchial catarrhs, showed many cases of so-called influenza. The clinical manifestations comprised pyrexia, back-ache, head-ache, chiefly frontal with pains in eyeballs, vomiting, or diarrhoea in some cases, sore throats in many, but not constant.

“The above may be merely predisposing influences, or some may have been mild cases of cerebro-spinal fever; but there is no definite evidence of this. It is, however, a fact that many of the military cases had symptoms of the above character, and that lumbar puncture revealed the presence of the meningococcus. I have not found any instance of direct transmission of the disease.

“There is no positive evidence of communication of the disease by ‘carriers’; but this may be due to precautionary measures. The probability is that the ‘carrier’ is infective under certain conditions, viz., overcrowding, defective ventilation, and inclement weather, leading to lowered individual resistance and greater susceptibility. It is equally certain that the best preventive measures are free ventilation, adequate space and protection against unseasonable weather. ‘Carriers’ should be in the open air as much as possible. The presence of mild and unrecognised cases, such as occur in other diseases, must not be lost sight of.

“The bacteriological identification of the meningococcus is of the greatest importance, but its differentiation from allied organisms belonging to the same group is a matter of difficulty. It has been found to be widely distributed, and present in a large percentage of the throats of non-contacts. The problem to be solved is the separation of the strain of meningococcus which is harmful from that which is relatively innocuous.”

*Rochester.*—“The hospital at Wigmore is of supreme benefit to those actually suffering from cerebro-spinal fever, but how far it is operative in arresting the spread of this disease is another matter. At the present time the precise channels through which, and the exact conditions under which cerebro-spinal fever spreads, are imperfectly understood, but it appears highly probable that the actual sufferer from the disease is of far less danger to the community than is the ‘carrier,’ and that the treatment of the cases in the wards of a general hospital would, under proper precautions, be no more dangerous than the treatment of typhoid fever under the same conditions.”

#### NON-NOTIFIABLE DISEASES.

WHOOPING COUGH.—Mortality from whooping cough during the past ten years :—

Year.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	
										Kent.	England and Wales.
Rate per 1,000	0·30	0·14	0·08	0·23	0·12	0·19	0·10	0·11	0·18	0·16	0·16

Whooping cough was less prevalent than in the previous year, 150 deaths being attributed to this cause as against 172 in 1915. The chief excess of mortality was in Dover with thirteen deaths. Twenty-one schools were closed on account of this disease in the non-autonomous areas.

DIARRHŒA.—Mortality from diarrhœa during the past ten years :—

Year.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	*1916.	
										Kent.	England and Wales.
Rate per 1,000	0·18	0·29	0·16	0·12	0·95	0·15	0·30	0·34	0·27	10·06	12·47

\* For 1916 the death-rates from diarrhœa relate to children dying under two years of age per 1,000 births. For previous years the rates are worked out on total deaths per 1,000 of the population.



There was a decrease in the number of deaths from diarrhœa, as compared with the previous year, the numbers being 215 and 257 respectively. 152 of the deaths occurred in urban districts and sixty-three in rural, and the chief excess of mortality is noted in Dartford Rural with eighteen deaths, Folkestone with sixteen, and Chatham and Gravesend with fourteen each.

An anti-fly-campaign is taken up in Kent during the summer months by the majority of the sanitary authorities, and literature on the subject is also distributed from the County Health Department. In addition, I have issued a memorandum and circular to each teacher in the county elementary schools, in order that the dangers of the common house-fly may be brought before the younger generation. The campaign has been energetically taken up in many schools, by the teachers, who have given lessons to the scholars on the subject, followed up by a distribution of the circulars for the children to take home to their parents.

### CANCER AND MALIGNANT DISEASES.

CANCER.—Mortality from cancer during the past nine years :—

	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.
URBAN.									
No. of Deaths .....	648	669	676	765	783	798	842	869	851
Death-rate .....	0·89	0·90	0·89	1·08	1·09	1·10	1·14	1·24	1·17
RURAL.									
No. of Deaths .....	281	281	276	327	324	360	348	349	357
Death-rate .....	0·94	0·93	0·91	1·05	1·05	1·14	1·11	1·14	1·12
TOTAL.									
No. of Deaths ....	929	950	952	1092	1107	1158	1190	1218	1208
Death-rate.....	0·90	0·91	0·90	1·07	1·08	1·11	1·13	1·21	1·16

Reference to the above table will show that the death rate from malignant disease appears to be increasing steadily.

Dr. Young, the County Medical Officer of Cheshire, has found a similar state of affairs in that county, and said that if this increase be maintained, as there seems to be every fear it will, the death-rate from malignant disease will have doubled itself in less than twenty years—a really appalling condition of things.

Mr. Hoffmann, the statistician of the Prudential Insurance Company of America, has said that the menace of cancer throughout the civilised world is much more serious than has generally been assumed to be the case. This increase is most serious, both at present and will be in the future to the



populations concerned. Also practically all forms of cancer appear to be on the increase.

The cause of cancer has not been discovered, and there is no evidence at present that it has a parasitical origin. Extended research work and further bacteriological investigations are needed urgently in this connection. It has been suggested that a more extended study should be made of the coincident occurrence of cancer and other diseases, chiefly gall-stones, syphilis, leprosy, rheumatism, gout, appendicitis, diabetes and tuberculosis. With regard to heredity and family history, some additional observations re-emphasize earlier conclusions that the available evidence in this respect is in the negative.

The findings with reference to the causative effect of prolonged irritation reinforce the view that it is important, wherever possible, to eliminate this factor by rational means. It is hoped that these diseases may be made subject to more effective methods of treatment and control.

#### VENEREAL DISEASES.

In July, 1916, the Local Government Board issued the Public Health (Venereal Diseases) Regulations, under which the Councils of Counties and County Boroughs were required to prepare and carry into effect approved schemes for the treatment of this class of disease. A summary of the regulations and the circulars and memoranda, which accompanied and followed the same, are contained on pages 10 to 16 of this report.

The urgency of the question was indicated in the following paragraph extracted from the report of the Royal Commission, following whose recommendations the regulations were issued :—

“That the conditions now existing and those which must follow on the conclusion of the war imperatively require that action should be taken without delay. We realise the claims of economy at the present moment ; but, for reasons we have given, we believe that all necessary expenditure will be recouped by the results which can be obtained. No shortsighted parsimony should be permitted to stand in the way of all means that science can suggest and organisation can supply, for guarding the present and future generations upon whom the restoration of national prosperity must depend.”

The scheme of the Kent County Council includes the establishment of treatment centres in seven districts in the county and participation in the arrangements made by the London County Council with twenty-two London hospitals.

At the time of writing this report, centres are in operation at the following hospitals in Kent:—

Name of Hospital.	Days and hours for men.	Days and hours for women.	Date of opening of Centre.
Dartford, 37, West Hill	Mondays and Wednesdays between 6 and 7 p.m.	Mondays and Wednesdays between 5 and 6 p.m.	Oct. 1st, 1917.
Dover, Royal Victoria Hospital	Thursdays at 4 p.m.	Tuesdays at 5 p.m.	Sept. 4th, 1917.
Gravesend, General Hospital	Fridays between 5 and 6 p.m.	Wednesdays between 5 and 6 p.m.	April 11th, 1917.
Rochester, St. Bartholomew's Hospital	Tuesdays and Thursdays between 5.30 and 7.30 p.m.	Thursdays between 3 and 5 p.m.	July 3rd, 1917.
Tunbridge Wells, General Hospital	Wednesdays and Fridays between 11 a.m. and 1 p.m.	Wednesdays and Fridays between 11 a.m. and 1 p.m.	Jan. 10th, 1917.

In addition to the above, the Kent and Canterbury Hospital, Canterbury, and the Royal Victoria Hospital, Folkestone, have decided to enter into the scheme and to establish treatment centres, but in each case it is necessary to erect temporary buildings in the hospital grounds for the purpose of the work, which has delayed matters. I hope, however, that these two additional centres will be in operation very shortly.

The following are the twenty-two hospitals in the London County Council scheme:—

Charing Cross, Great Ormond Street Hospital for Sick Children, Great Northern, Guys, King's College, London Lock (Dean Street, Soho, and Harrow Road, W.), London, Middlesex, Miller General, New Women's, Royal Free, St. George's, St. John's, St. Mary's, St. Paul's, St. Thomas's, Seamen's, South London for Women, University College, West London and Westminster.

The Croydon General Hospital, in the neighbouring County of Surrey, has established a centre for the treatment of venereal diseases in women and children from the Borough of Croydon, and as it is contemplated that patients will attend from adjoining counties, the Kent County Council have agreed to pay a proportionate charge for any Kent patients who are treated under the arrangement.

The Kent County Council have decided to re-pay the travelling expenses of necessitous patients in attending at the venereal diseases clinics, in accordance with the suggestion of the Local Government Board.



Arrangements have been made for the examination of pathological specimens sent from the treatment centres, and from private medical practitioners, at the Kent County Bacteriological Laboratory for the detection of spirochaetes and gonococci, and at the King's College Hospital Laboratory for the Wasserman re-action.

Salvarsan substitutes are supplied to accredited medical practitioners, direct by the County Medical Officer, and a card index register of such practitioners is kept at the office.

The educational and propaganda arrangements have been undertaken by the National Council for Combating Venereal Diseases, the Council conferring with the County Medical Officer as to arrangements.

The total estimated cost of the Kent scheme for the first year is £3,150.

### SCHOOL CLOSURES.

The following tabulation sets out the number of school closures in the non-autonomous areas of the county during 1916 on account of the prevalence of infectious diseases, and shows the different diseases which called for that step, together with the duration of the closure :—

Reason of Closure.	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	4-5 weeks	5-6 weeks	6 weeks & over	Total
Chicken-pox .....	—	1	—	—	—	—	—	1
Scarlet Fever .. .	—	—	2	—	—	—	—	2
Measles .....	5	7	10	11	7	2	—	42
Diphtheria .....	4	—	1	1	—	—	2	8
Mumps .. .	1	—	—	—	—	—	—	1
Whooping Cough .....	—	4	6	6	4	1	—	21
Measles and Influenza .....	—	—	—	—	—	—	—	—
Scarlet Fever and Diphtheria	—	1	—	—	—	—	—	1
Chicken-pox and Influenza ..	—	—	—	—	—	—	—	—
Measles and Chicken-pox.....	—	—	—	1	—	—	—	1
Measles and Whooping Cough	—	1	1	—	—	—	—	2
Mumps and Whooping Cough	—	—	—	1	—	—	—	1
Rubella .. .	—	—	1	1	—	—	—	2
Miscellaneous.....	—	1	—	—	1	—	—	2
Totals .....	10	15	21	21	12	3	2	84

The school closures during 1915 totalled one hundred, the chief contributing diseases being measles forty-three, whooping cough nineteen and scarlet fever seventeen.



TABLE 11.—In regard to Births and Deaths, Zymotic, Phthisis and Infantile Mortality, and Incidence of Scarlet Fever, Diphtheria and Enteric Fever—showing the amount of the rate above or below the Urban District average for the years 1916, 1915 and the five years' average 1910–1914, in each Urban District in the County of Kent.

DISTRICT.	Birth Rate.			Death Rate.			Zymotic Death Rate.			Phthisis Death Rate.			Infantile Mortality per 1,000 births.			Incidence Rate of Infectious Diseases per 1,000 of the population.								
																Scarlet Fever.			Diphtheria.			Enteric Fever.		
	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.
Ashford ... ..	1·0	0·2	1·3	0·6	0·3	0·3	0·12	0·68	0·03	0·18	0·29	0·06	11	13	9	0·23	0·11	0·94	0·21	0·06	0·99	0·04	0·27	0·46
Beckenham ... ..	3·4	2·7	2·7	3·2	4·4	2·3	0·50	0·43	0·34	0·18	0·55	0·22	12	24	18	0·26	1·56	0·83	1·41	1·00	0·48	0·03	0·14	0·11
Bexley ... ..	1·4	2·6	1·9	0·6	0·2	0·7	0·37	0·21	0·07	0·18	0·08	0·17	23	19	3	4·72	2·75	1·41	0·72	1·52	0·71	0·20	0·27	0·27
Broadstairs and St. Peter's...	8·4	8·2	7·2	3·7	3·3	2·0	0·36	0·65	0·52	0·09	0·15	0·18	50	58	31	0·82	1·18	0·24	1·60	1·15	0·03	0·14	0·16	0·10
Bromley (Borough)...	2·8	1·7	1·8	2·1	3·1	1·9	0·20	0·32	0·34	0·16	0·26	0·22	9	40	16	1·24	0·31	0·01	0·31	1·50	0·39	0·22	0·17	0·27
Chatham (Borough)	4·2	2·5	4·5	1·2	4·2	2·1	0·38	0·69	0·73	0·05	0·71	0·49	9	30	23	0·24	0·33	0·04	0·26	0·39	1·60	0·19	0·16	0·03
Cheriton ... ..	4·5	0·6	6·3	0·9	5·1	1·8	0·11	2·70	0·29	0·05	0·02	0·05	10	72	3	4·51	4·14	0·23	0·19	2·58	0·93	0·26	0·27	0·31
Chislehurst ... ..	2·9	0·6	2·0	2·6	4·2	2·7	0·21	0·01	0·61	0·13	0·52	0·36	13	16	32	0·87	0·59	0·50	1·01	0·43	1·01	0·13	0·03	0·22
Dartford ... ..	0·9	0·6	1·7	2·8	2·7	1·2	0·40	0·33	0·04	0·05	0·14	0·19	3	4	6	1·87	5·37	0·34	0·96	0·72	0·11	0·07	0·14	0·35
Deal (Borough) ... ..	0·4	0·1	1·1	0·8	4·8	1·7	0·20	1·40	0·15	0·20	0·05	0·10	10	19	0	0·50	0·23	0·12	1·44	1·16	1·53	0·16	0·17	0·02
Dover (Borough) ... ..	3·4	1·3	1·0	2·0	2·2	0·7	0·10	0·33	0·10	0·11	0·32	0·05	2	34	8	0·68	0·49	0·76	0·55	1·20	0·05	0·13	1·26	0·20
Erith ... ..	1·0	5·2	4·3	3·8	4·1	1·1	0·39	0·11	0·03	0·33	0·31	0·05	17	18	9	3·09	3·57	2·00	1·64	0·88	0·20	0·14	0·18	0·01
Faversham (Borough)	3·0	3·6	0·9	3·9	0·6	1·4	0·35	0·01	0·02	0·19	0·29	0·02	13	2	3	0·33	0·30	0·25	0·18	0·02	1·40	0·27	0·18	0·41
Folkestone (Borough)	1·2	2·4	3·2	0·0	0·8	0·6	0·16	0·71	0·07	0·20	0·17	0·05	4	23	11	0·13	0·72	0·62	0·00	0·16	0·59	0·23	0·02	0·20
Footseray ... ..	5·5	1·9	5·1	2·4	3·9	3·0	0·46	0·28	0·36	0·05	0·54	0·46	9	34	22	1·38	2·41	0·44	0·94	1·30	0·10	0·26	0·27	0·24
Gillingham (Borough)	4·8	0·6	3·0	0·4	1·2	0·2	0·29	0·03	0·13	0·24	0·06	0·08	5	3	4	0·15	0·10	0·58	0·76	0·02	0·65	0·07	0·15	0·08
Gravesend (Borough)	2·8	2·7	1·6	2·5	0·8	1·7	0·55	0·00	0·18	0·16	0·22	0·20	7	2	5	0·46	0·79	0·77	0·65	1·31	0·60	0·11	0·02	0·06
Herne Bay ... ..	5·2	5·1	5·2	0·3	2·2	0·3	0·13	0·41	0·12	0·62	0·52	0·34	35	39	14	0·52	0·50	0·62	0·25	1·14	1·03	0·26	0·01	0·11
Hythe (Borough) ... ..	0·3	2·0	0·8	0·5	1·8	0·1	0·40	0·07	0·46	0·06	0·05	0·10	4	5	26	1·15	2·24	1·30	0·32	2·11	1·46	0·26	0·27	0·28
Lydd (Borough) ... ..	0·5	*	3·6	3·7	*	1·2	0·19	*	0·16	0·20	*	0·17	15	*	20	2·08	*	1·30	1·74	*	1·66	0·26	*	0·24
Maidstone (Borough)	1·0	0·5	0·2	3·0	1·8	0·9	0·08	0·25	0·07	0·34	0·72	0·36	3	11	3	1·11	0·46	0·28	0·93	1·26	0·70	0·94	0·20	0·02
Margate (Borough)...	8·8	4·2	4·5	1·3	1·6	0·1	0·21	0·22	0·11	0·20	0·44	0·10	8	24	14	0·23	0·89	0·20	0·45	0·24	0·66	0·09	0·04	0·03
Milton Regis ... ..	0·6	0·3	2·3	2·6	0·9	0·2	0·04	0·25	0·23	0·07	0·56	0·01	8	37	14	1·78	0·55	2·50	1·22	0·62	1·27	0·26	0·02	0·12
New Romney (Borough)	2·3	3·2	3·2	1·2	5·0	4·5	1·82	0·15	0·63	0·25	1·00	0·09	25	3	56	2·08	1·36	1·45	0·06	1·17	1·20	0·26	0·27	0·31
Northfleet ... ..	4·0	9·2	6·2	0·0	0·9	0·8	0·84	0·12	0·39	0·14	0·25	0·05	0	3	16	0·54	0·68	3·23	0·29	1·22	0·85	0·23	0·13	0·10
Penge ... ..	2·2	0·2	2·0	0·1	0·5	0·5	0·56	0·02	0·13	0·02	0·18	0·00	19	1	2	0·72	0·78	1·27	0·47	1·02	0·94	0·21	0·27	0·14
Queenborough (Borough)	10·6	9·4	6·0	3·7	0·5	1·7	1·60	0·35	0·46	0·41	0·02	0·27	8	50	7	14·34	1·34	2·17	7·46	0·79	1·27	0·07	0·38	0·32
Ramsgate (Borough)	2·1	2·4	0·9	3·0	2·7	1·2	0·41	0·31	0·13	0·25	0·59	0·04	9	18	12	1·55	1·21	0·88	0·36	0·10	0·85	0·17	0·16	0·28
Rochester (City) ... ..	0·8	1·9	1·8	0·3	0·3	0·5	0·16	0·22	0·24	0·08	0·16	0·08	0	11	2	0·57	0·67	0·98	0·84	0·08	1·41	0·34	0·17	0·58
Sandgate ... ..	4·6	14·0	8·9	5·6	2·2	2·8	0·70	1·93	0·57	0·51	0·17	0·56	75	20	6	0·98	1·24	1·89	1·74	0·22	1·73	0·26	0·27	0·21
Sandwich (Borough)	1·8	0·2	1·8	4·7	3·9	0·4	0·34	0·63	0·07	0·29	0·32	0·06	12	22	13	1·36	2·99	1·48	1·74	1·77	1·34	0·10	0·27	0·24
Sevenoaks ... ..	7·1	4·8	3·1	0·9	0·7	1·2	0·34	0·40	0·35	0·41	0·60	0·19	19	12	28	1·12	2·42	0·22	0·43	1·65	1·40	0·14	0·27	0·27
Sheerness ... ..	7·5	3·1	3·4	0·1	2·9	0·9	0·60	0·66	0·16	0·41	0·09	0·06	2	16	5	0·21	0·39	1·46	0·98	5·73	0·73	1·19	0·94	0·28
Sittingbourne ... ..	3·3	5·6	4·1	0·2	1·1	0·7	0·16	0·49	0·23	0·33	0·64	0·06	9	43	13	1·10	1·15	2·66	5·47	1·79	1·27	0·26	0·21	0·18
Southborough ... ..	1·5	1·7	1·5	2·2	2·4	0·4	0·38	0·97	0·12	0·14	0·08	0·03	15	7	14	1·60	2·12	0·54	0·32	0·73	4·52	0·10	0·27	0·23
Tenterden (Borough)	5·7	3·8	1·8	0·1	3·3	1·2	0·70	0·34	0·39	0·49	0·26	0·48	5	53	10	1·09	3·94	1·55	1·74	1·79	1·62	0·26	0·27	0·12
Tonbridge ... ..	1·3	1·1	0·8	0·3	0·1	0·6	0·40	0·61	0·19	0·20	0·08	0·00	9	12	8	0·97	0·40	0·15	0·69	0·89	0·47	0·03	0·12	0·01
Tunbridge Wells (Borough)	6·5	3·7	5·2	1·4	2·0	0·4	0·20	0·58	0·35	0·25	0·13	0·11	13	0	14	1·73	2·45	1·09	0·19	0·38	0·36	0·13	0·24	0·21
Walmer ... ..	4·8	3·7	4·3	0·8	2·8	2·2	0·17	0·70	0·71	0·29	0·43	0·59	1	35	7	0·02	0·88	1·44	0·95	1·84	1·52	0·26	0·00	0·27
Whitstable ... ..	1·2	2·2	1·2	2·6	0·5	0·0	0·44	0·35	0·04	0·37	0·14	0·06	10	18	14	1·20	1·27	0·92	1·15	4·63	1·45	0·00	0·27	0·55
Wrotham ... ..	2·6	1·0	2·3	1·4	4·4	1·9	0·70	0·97	0·30	0·08	0·51	0·30	49	12	22	1·06	2·01	2·06	0·04	1·13	1·66	0·26	0·27	0·01
Average rates of the 41 Urban Districts ... ..	20·8	19·0	20·6	13·9	14·7	11·4	0·70	0·97	0·93	1·02	1·00	0·84	75	92	85	2·08	2·99	2·80	1·74	2·11	1·78	0·26	0·27	0·31

The figures printed in red represent the balance of the rate above the rate for the aggregate Urban Districts, and the figures in black the balance of the rate below the average.  
(The actual rate is obtained by adding or deducting the figures shewn, to or from the average rates given in the last line).  
\* No figures are available for Lydd (Borough) for the year 1915.





TABLE 12.—In regard to Births and Deaths, Zymotic, Phthisis and Infantile Mortality, and Incidence of Scarlet Fever, Diphtheria and Enteric Fever—showing the amount of the rate above or below the Rural District average for the years 1916, 1915 and the five years' average 1910–1914, in each Rural District in the County of Kent.

DISTRICT.	Birth Rate.			Death Rate.			Zymotic Death Rate.			Phthisis Death Rate.			Infantile Mortality per 1,000 births.			Cases of Infectious Diseases per 1,000 of the population.								
																Scarlet Fever.			Diphtheria.			Enteric Fever.		
	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.	1916.	1915.	Aver. 1910–1914.
Ashford, East ... ..	0·8	<b>0·4</b>	1·5	<b>0·9</b>	1·0	<b>0·8</b>	<b>0·07</b>	0·14	0·15	0·17	0·13	0·14	6	10	7	0·32	1·29	0·61	<b>0·39</b>	0·38	0·33	0·06	0·05	0·06
Ashford, West ... ..	3·3	5·2	2·6	<b>0·8</b>	<b>0·5</b>	<b>0·6</b>	0·24	0·33	0·18	<b>0·41</b>	<b>0·43</b>	<b>0·11</b>	3	8	24	<b>0·01</b>	<b>0·23</b>	0·89	0·56	<b>0·77</b>	0·68	0·14	0·00	0·18
Blean... ..	<b>1·1</b>	2·3	1·8	<b>2·5</b>	0·8	0·2	<b>0·05</b>	0·32	0·26	<b>0·66</b>	0·09	<b>0·04</b>	36	26	29	1·29	<b>0·03</b>	0·86	<b>0·15</b>	0·39	<b>0·06</b>	<b>0·01</b>	0·14	0·02
Bridge ... ..	<b>2·5</b>	0·1	0·0	<b>1·0</b>	<b>1·4</b>	0·4	<b>0·37</b>	<b>0·67</b>	0·09	0·09	0·28	<b>0·32</b>	2	6	18	0·00	<b>4·34</b>	1·05	<b>0·37</b>	0·73	0·41	0·14	0·03	0·04
Bromley ... ..	1·0	0·1	0·7	0·2	1·3	<b>0·4</b>	0·17	0·29	<b>0·10</b>	<b>0·15</b>	0·26	<b>0·24</b>	21	7	2	0·63	1·51	0·66	0·71	2·05	0·12	<b>0·00</b>	0·09	0·04
Cranbrook ... ..	2·1	1·2	1·7	1·0	<b>1·2</b>	0·1	0·11	0·36	0·37	0·15	0·68	0·17	20	5	3	0·58	0·69	1·26	<b>0·56</b>	1·53	0·30	0·05	0·11	0·09
Dartford ... ..	<b>3·6</b>	<b>2·4</b>	1·9	0·9	1·2	0·2	<b>0·49</b>	0·52	<b>0·40</b>	<b>0·31</b>	0·11	0·06	5	8	7	<b>1·11</b>	<b>2·24</b>	<b>0·70</b>	0·12	<b>0·52</b>	0·22	<b>0·04</b>	<b>0·07</b>	0·11
Dover .. ..	3·5	5·4	0·5	2·3	<b>0·7</b>	<b>0·4</b>	<b>0·03</b>	0·11	<b>0·22</b>	0·40	0·07	0·25	12	41	11	<b>0·38</b>	1·74	0·11	0·87	1·89	0·26	0·11	<b>0·29</b>	0·15
Eastry ... ..	1·6	<b>0·5</b>	<b>0·9</b>	0·8	<b>0·4</b>	0·7	0·12	0·04	0·29	0·47	0·05	0·13	2	20	3	0·36	0·12	<b>0·50</b>	0·78	0·58	<b>0·34</b>	0·05	0·14	0·15
Elham . . . . .	1·9	3·2	4·3	0·8	2·1	0·8	0·25	<b>0·05</b>	0·24	0·29	0·52	<b>0·06</b>	10	29	32	<b>0·20</b>	0·21	<b>0·57</b>	1·29	1·92	0·65	<b>0·00</b>	<b>0·13</b>	0·12
Faversham ... ..	<b>3·1</b>	<b>3·6</b>	1·5	4·5	<b>1·4</b>	1·0	0·38	0·04	<b>0·03</b>	0·14	0·54	<b>0·06</b>	1	8	9	<b>1·95</b>	<b>0·31</b>	0·64	<b>3·36</b>	<b>3·70</b>	<b>2·00</b>	<b>0·08</b>	0·14	<b>0·28</b>
Hollingbourn ... ..	0·6	2·6	1·2	<b>0·2</b>	1·5	<b>0·4</b>	0·11	0·11	0·20	0·23	0·35	<b>0·05</b>	7	6	7	0·41	<b>2·18</b>	0·69	0·84	0·14	0·46	0·14	0·05	0·12
Hoo .. . . .	<b>5·0</b>	<b>5·4</b>	5·5	1·0	0·0	0·5	0·27	<b>0·39</b>	0·29	0·45	0·67	0·50	39	6	2	1·32	<b>1·71</b>	0·36	0·92	<b>0·15</b>	1·03	0·14	0·11	0·16
Maidstone ... ..	2·3	<b>1·4</b>	0·2	0·6	1·8	1·1	0·00	<b>0·44</b>	<b>0·17</b>	<b>0·29</b>	<b>0·66</b>	<b>0·06</b>	1	2	12	0·52	0·05	<b>1·02</b>	0·37	<b>1·27</b>	0·02	0·14	0·14	0·17
Malling ... ..	0·5	<b>1·1</b>	1·9	<b>0·7</b>	<b>0·6</b>	<b>0·5</b>	0·63	0·42	<b>0·15</b>	<b>0·03</b>	0·32	0·03	16	8	3	<b>1·23</b>	0·64	<b>1·67</b>	0·49	1·55	<b>0·37</b>	0·09	<b>0·21</b>	<b>0·06</b>
Milton ... ..	<b>1·1</b>	<b>3·3</b>	1·2	0·7	0·6	0·3	0·12	0·72	<b>0·05</b>	0·62	0·02	0·01	19	43	9	0·11	0·15	<b>0·29</b>	2·23	<b>1·33</b>	<b>0·14</b>	<b>0·27</b>	<b>0·18</b>	0·05
Romney Marsh ... ..	1·4	<b>1·7</b>	1·5	1·8	0·2	<b>1·2</b>	0·14	0·23	0·30	<b>0·83</b>	0·18	<b>0·55</b>	10	6	15	0·83	0·89	1·41	1·04	1·22	1·33	0·14	0·14	0·01
Sevenoaks .. . .	2·3	1·9	1·6	1·4	1·6	0·6	0·21	0·16	0·33	<b>0·23</b>	0·22	0·15	13	9	13	0·37	1·17	<b>0·97</b>	<b>1·26</b>	<b>2·17</b>	1·15	0·14	0·09	0·13
Sheppey ... ..	<b>7·8</b>	<b>0·7</b>	<b>1·4</b>	3·1	2·1	1·0	0·05	<b>1·53</b>	0·05	0·48	<b>0·26</b>	0·28	13	4	18	1·10	<b>0·35</b>	0·01	<b>0·69</b>	<b>1·47</b>	<b>1·32</b>	0·14	<b>1·05</b>	0·01
Strood ... ..	<b>2·7</b>	<b>2·2</b>	<b>3·4</b>	0·5	0·7	0·2	<b>0·14</b>	0·89	<b>0·22</b>	0·00	<b>0·31</b>	0·09	17	9	<b>15</b>	1·11	<b>0·06</b>	<b>1·86</b>	0·49	1·08	<b>0·16</b>	<b>0·13</b>	0·01	<b>0·52</b>
Tenterden ... ..	1·9	0·5	0·5	1·6	2·3	0·5	0·53	0·42	0·54	<b>0·47</b>	0·05	0·13	38	1	15	1·58	2·73	1·14	0·10	2·32	0·90	<b>0·05</b>	0·14	0·20
Thanet .. . . .	5·0	4·7	4·4	<b>2·4</b>	1·2	0·1	<b>0·36</b>	0·28	<b>0·05</b>	0·10	<b>0·14</b>	<b>0·26</b>	3	3	<b>24</b>	0·02	0·52	0·22	0·93	2·21	0·01	<b>0·31</b>	0·14	<b>0·19</b>
Tonbridge .. . .	1·9	1·7	0·8	1·9	2·1	<b>0·6</b>	0·40	0·19	<b>0·20</b>	0·30	0·16	<b>0·07</b>	30	45	4	<b>0·01</b>	1·79	0·01	0·39	1·44	<b>0·89</b>	<b>0·23</b>	0·08	0·14
Average rates of the 23 Rural Districts ... ..	19·6	18·7	20·5	13·3	13·8	10·6	0·53	0·60	0·74	0·92	0·92	0·83	68	82	81	1·58	2·73	2·23	1·43	2·32	1·41	0·14	0·14	0·23

The figures printed in red type represent the balance of the rate above the rate for the aggregate Rural Districts, the figures in black the balance of the rate below the average.  
(The actual rate is obtained by adding or deducting the figures shown to or from the average rates given in the last line).





BACTERIOLOGICAL LABORATORY.

It is again my pleasing duty to report that the year under review has been the most successful year in the county bacteriological laboratory at Maidstone since it was established in 1911. There has been an increase in the number of specimens sent here for examination, 12,936 specimens being examined during 1916, as compared with 12,663 in 1915.

With a small number of exceptions, the general medical practitioners throughout Kent appreciate this work very highly, and it is rightly regarded as one of the most important branches of the public health department of the county.

I mentioned in my annual health report for 1913 the steps which had been taken to popularise this branch of the service, and I also indicated the advantages which are gained through the attachment of a bacteriological laboratory to the county health department.

Again, I repeat, that financially, it is more economical to conduct this work in a county laboratory than to pay for such to be carried out in an outside laboratory.

It is interesting, in this connection, to compare the cost of administering a county laboratory with the cost of paying for the same work if it had been carried out at a private laboratory. In the latter case, during 1916, the cost to the county would have been as follows :—

	£	s.	d.
9331 Diphtheria swabs at 5s. ....	2332	15	0
311 Blood examinations for typhoid at 5s. .. ...	77	15	0
2082 Sputum examinations for tuberculosis at 2s. 6d. ....	260	5	0
783 Ringworm examinations at 3s. ....	117	9	0
103 Water examinations at £1 1s. ....	108	3	0
326 Various examinations at 10s. 6d. ....	171	3	0
	<hr/>		
	£3,067	10	0
	<hr/>		

I estimate that the actual annual cost of the laboratory to the county during the past three years, allocating two-thirds of the assistant county medical officer's salary to bacteriological work, did not exceed £800.

As the results of the important preventive work carried out by a county health department can rarely be shown in actual figures, it is again pleasing to record, in this instance, a distinct economic gain, apart from the saving of life, to the County Council.

In the table opposite this page, it is possible to compare the numbers of specimens of various kinds examined at the laboratory during the years 1913 to 1916. For the purpose of more accurate comparison, the number of specimens examined per notified case respectively of diphtheria, typhoid fever and phthisis, is also shown in brackets. It will be noticed that again there has been a general tendency for more bacteriological work to be required in connection with each case during 1916 than during 1915. Thus, in connection with diphtheria in 1916, 5·9 examinations were made on an average for each case notified, compared with 4·2 in 1915.

DIPHTHERIA.—The tables on pages 58 to 61 show the numbers of diphtheria examinations carried out for each district, and its hospital, and also the numbers of throat swabs collected from patients in the acute stage and the convalescent stage respectively, and also from persons who had been in contact with cases of diphtheria.

In certain districts, these figures are satisfactory, notably in the Ashford, Dover, Folkestone, Maidstone, New Romney, Sevenoaks, Sittingbourne, and Southborough Urban districts, and in the East and West Ashford, Blean, Bridge, Cranbrook, Eastry, Elham, Faversham, Maidstone, Malling, Romney Marsh, Sevenoaks, Sheppey and Tonbridge Rural Districts. In some districts the ratio between the examinations and the cases notified is less satisfactory. As stated previously, a higher figure would indicate greater keenness amongst the medical practitioners to discover the cause of outbreaks, and so to assist in limiting the extension of such outbreaks. Although there has been a greater improvement during 1916, than in any previous year, the figures which show the numbers of "contact" throat swabs examined are still too low. This figure should be at least three times the number of cases of diphtheria notified. Thus the number of "contact" throat swabs, instead of being 3777, should have been about 4750, since there were 1581 cases of diphtheria notified in the county during the year. As mentioned before, the adoption of such precautionary measures is one of the most valuable directions in which the laboratory can be utilized. It is to be hoped that more advantage will be taken in the future of the excellent opportunities which are here provided.

With respect to the number of examinations per notification of diphtheria, it is interesting to note that during 1916, the improvement was considerably more marked in the rural than in the urban districts of the county.

TYPHOID FEVER.—There was a slight decrease in the number of cases of typhoid fever notified during 1916, as compared with 1915. No important



TABLE 13.—Showing the numbers of specimens of each kind sent to the Laboratory for examination from **Urban** and **Rural Districts** during the years 1913, 1914, 1915 and 1916.

Districts.	Diphtheria.				Typhoid Fever.				Phthisis.			
	1913.	1914.	1915.	1916.	1913.	1914.	1915.	1916.	1913.	1914.	1915.	1916.
Urban .....	2841 (2·11)	5312 (2·8)	4521 (3·15)	<b>4212 (3·6)</b>	126 (1·0)	205 (1·0)	218 (1·17)	<b>237 (1·4)</b>	690 (0·5)	1141 (0·9)	1268 (1·1)	<b>1507 (1·3)</b>
Rural.....	1157 (2·7)	2822 (3·7)	3462 (4·9)	<b>4104 (9·8)</b>	62 (0·85)	71 (1·0)	61 (1·5)	<b>48 (1·2)</b>	186 (0·34)	368 (0·8)	409 (1·07)	<b>487 (1·1)</b>
Total..... (including Combined Hospitals and additional Military specimens.)	4125 (2·34)	8405 (3·2)	8964 (4·2)	<b>9331 (5·9)</b>	194 (0·94)	289 (1·0)	300 (1·35)	<b>311 (1·5)</b>	876 (0·45)	1511 (0·85)	1803 (1·24)	<b>2082 (1·4)</b>

Districts.	Ringworm.				Water.				Various.				Grand Total.				Milk.		
	1913.	1914.	1915.	1916.	1913.	1914.	1915.	1916.	1913.	1914.	1915.	1916.	1913.	1914.	1915.	1916.	1913.	1914.	1915 AND 1916.
Urban .....	799	745	589	<b>551</b>	48	67	74	<b>91</b>	119	153	362	<b>271</b>	4620	7623	7031	<b>6869</b>	77	44	Tuberculosis Order suspended.
Rural.....	290	341	231	<b>232</b>	11	8	9	<b>12</b>	21	35	95	<b>54</b>	1727	3645	4267	<b>4937</b>			
Total..... (including Combined Hospitals and additional Military specimens.)	1089	1086	820	<b>783</b>	59	75	83	<b>103</b>	141	190	694	<b>326</b>	6476	11556	12663	<b>12936</b>			

NOTE.—The figures in brackets show the number of specimens examined per case notified.



outbreaks have occurred except at Maidstone. The ratio of examinations to cases notified, was 1·4 in the urban and 1·2 in the rural districts of the county.

**PHTHISIS.**—The total number of specimens of sputum sent for examination for the presence of the bacillus of tuberculosis has increased during 1916, as compared with the total number sent during 1915. In great measure this increase is due to the rigorous continuance of the administration of sanatorium benefit in connection with the National Insurance Act. The numbers of examinations required, per case notified, were 1·3 and 1·1 in the urban and rural districts respectively. These figures show an improvement as compared with the year 1915, but there is a need for still further improvement in this respect. When the examination of a specimen of sputum produces a negative result, such a specimen should be examined again (perhaps many times) before the decision is given by the medical practitioner that tuberculosis is not present in the lungs of that patient.

**RINGWORM.**—The number of examinations of specimens of hair from children suspected to be suffering from ringworm, was 783 during 1916 compared with 820 in 1915.

**WATER EXAMINATIONS.**—The number of samples of water examined bacteriologically during 1916 was one hundred and three, compared with eighty-three such examinations during 1915.

**VARIOUS EXAMINATIONS.**—In table No. 16 details have been given as to the “various” bacteriological examinations carried out during 1916. These have decreased to 326, as compared with 694 such examinations during 1915, but this figure still shows a vast improvement on years previous to 1915. They show the wide scope of the utility of this laboratory.

Included in the previous totals are the following specimens, examined in connection with troops stationed in the county of Kent during 1916 :—

Swabs for diphtheria.....	481
Blood for typhoid fever .....	22
Sputum for tubercle bacilli .....	416
Various .....	27
Total.....	<u>946</u>

Also the following specimens were examined for the County Borough of Canterbury :—

Swabs for diphtheria.....	27
Sputum for tubercle bacilli .....	16
Waters.....	3
Total.....	<u>46</u>

Number of doses of tuberculin prepared during the year 74



TABLE 14.—Analysis of Work carried out in County Bacteriological Laboratory.

URBAN DISTRICTS.

DISTRICT.	DIPHTHERIA.				TYPHOID FEVER.			PHTHISIS.			Ringworm. Number of Examinations.	Waters. Number of Examinations.	Various. Number of Examinations.	Total Number of Examinations.	
	Number of examinations made.				Number of Notifications.	Number of Notifications.	Number of Notifications per Notification.	Number of Examinations.	Number of Notifications.	Number of Examinations per Notification.					
	Acute Stage.	Convalescent Stage.	Contacts.	Total.											
Ashford ...	42	29	13	161	27	6.0	3	2.0	29	15	1.9	53	1	2	252
"Hospital	3	74	0	4	10	0.4	7	—	7	40	0.2	0	0	1	12
Beckenham ...	2	2	0	12	19	0.6	1	2	27	38	0.7	18	0	3	62
Bexley ...	11	0	0	101	30	3.4	1	3	12	15	0.8	8	3	6	133
"Hospital	1	3	82	130	46	2.8	1	5	64	36	1.8	0	0	16	215
Broadstairs and St. Peter's	16	50	29	111	76	1.5	17	0.9	127	79	1.6	28	0	6	287
Bromley ...	51	23	13	3	8	0.4	0	—	7	14	0.5	5	0	0	15
Chatham...	75	0	3	5	6	0.8	1	1	11	9	1.2	16	0	1	34
Cheriton ...	0	0	0	16	17	0.9	7	0.14	55	30	1.8	43	0	1	116
"Hospital	0	0	0	3	3	1.0	1	—	32	12	2.7	1	0	2	38
Chislehurst ...	5	7	0	212	46	4.6	5	1.4	40	44	0.9	3	0	7	269
Dartford ...	9	100	8	395	118	3.3	4	1	31	50	0.6	0	17	9	456
Deal ...	3	2	0	39	22	1.8	6	1	34	12	2.8	0	13	13	105
Dover ...	37	12	13	220	59	13.9	1	5	45	37	1.2	34	0	19	918
"Hospital...	65	324	0	815	23	0.4	0	—	10	7	1.4	14	0	0	33
Erith ...	46	0	3	9	0										
"Hospital...	14	22	0	220	59	13.9	1	5	45	37	1.2	34	0	19	918
Faversham ...	0	35	220	815	23	0.4	0	—	10	7	1.4	14	0	0	33
"Hospital	115	420	3	9	0										
Folkestone ...	22	9	0	220	59	13.9	1	5	45	37	1.2	34	0	19	918
"Hospital	22	9	0	220	59	13.9	1	5	45	37	1.2	34	0	19	918
Footscray ...	9	0	0	9	23	0.4	0	—	10	7	1.4	14	0	0	33

Gillingham	15	35	20	2	166	43	3.8	$\left\{ \begin{smallmatrix} 11 \\ 12 \end{smallmatrix} \right\}$	8	1.5	152	90	1.7	4	7	2	343
"Hospital	—	1	108	0													
Gravesend	15	72	79	40	191	65	3.0	3	4	0.75	58	42	1.4	22	0	4	278
"Hospital	—	0	0	0													
Herne Bay	8	26	3	11	40	14	2.9	0	0	—	27	12	2.3	19	0	21	107
"Hospital	—	0	0	0													
Hythe	5	23	13	8	44	14	3.1	2	0	0	10	9	1.1	5	0	1	62
Lydd	1	0	0	0		0	0	0	0	0	0	4	0	0	0	1	1
"Hospital	—	0	0	0													
Maidstone	17	34	26	8	156	25	6.2	$\left\{ \begin{smallmatrix} 77 \\ 79 \end{smallmatrix} \right\}$	37	2.1	145	82	1.8	167	2	$95 \left\{ \begin{smallmatrix} 53 \\ 42 \end{smallmatrix} \right\}$	644
"Hospital	—	20	68	0													
Margate	11	31	3	2	36	32	1.1	6	4	1.5	59	59	1	30	0	3	134
Milton Regis	8	25	2	30	57	20	2.8	0	0	0	31	21	1.5	6	0	3	97
New Romney	4	5	0	399	404	2	202.0	2	0	—	7	2	3.5	0	1	9	423
Northfleet	8	8	4	0	12	29	0.4	2	7	0.3	9	20	0.5	4	0	0	27
Penge	14	7	32	1	40	28	1.4	0	1	—	31	42	0.7	8	0	0	79
Queenborough	2	34	3	3	40	28	1.4	0	1	—	6	4	1.5	1	0	0	47
Ramsgate	16	39	2	2	43	34	1.3	2	2	1	59	46	1.3	3	2	4	113
Rochester	17	52	12	6	70	78	0.9	21	18	1.2	86	55	1.6	14	24	0	215
Sandgate	1	1	0	0	1	0	—	0	0	—	0	1	—	0	0	0	1
Sandwich	2	0	0	0	0	0	—	0	0	—	7	5	1.4	0	0	0	7
Sevenoaks	9	27	8	13		11	6.1	1	0	—	67	14	4.8	0	0	13	148
"Hospital	—	2	17	0													
Sheerness	7	20	15	63	98	45	2.2	30	24	1.25	51	37	1.3	19	14	3	215
Sittingbourne	10	85	29	211	325	59	5.5	9	0	—	34	9	3.8	12	0	16	396
Southborough	6	16	2	10		9	5.8	$\left\{ \begin{smallmatrix} 0 \\ 1 \end{smallmatrix} \right\}$	1	1	23	10	2.3	1	0	0	77
"Hospital	—	1	23	0													
Tenterden	2	0	0	0	0	0	—	0	0	—	3	7	0.4	1	0	0	4
Tonbridge	12	26	2	7													
"Hospital	—	13	72	1	121	33	3.6	1	3	0.3	23	40	0.6	2	2	2	151
Tunbridge Wells	9	34	22	32		50	2.8	5	4	1.2	34	45	0.8	3	0	1	180
"Hospital	—	0	48	1	137												
Walmer	4	5	0	0	5	3	1.6	1	0	—	35	7	5	3	1	1	46
Whitstable	5	38	8	31	77	23	3.3	5	2	2.5	15	10	1.5	0	4	3	104
Wrotham	3	8	2	4		7	2.0	0	0	—	4	2	2	4	0	3	25
"Hospital	—	0	0	0	14												
Totals in Urban Districts		1214	1726	1272	4212	1162	3.6	237	171	1.4	1507	1113	1.3	551	91	271	6869



TABLE 15.—Analysis of Work carried out in the County Bacteriological Laboratory.

**RURAL DISTRICTS.**

DISTRICT.	Number of Doctors sendings in Specimens.	DIPHTHERIA.				TYPHOID FEVER.				PHTHISIS.			Ringworm. Number of Examinations.	Waters. Number of Examinations.	Various. Number of Examinations.	Total Number of Examinations.
		Number of examinations made.		Convalescent Stage.	Contacts.	Total.	Number of Notifications.	Number of Examinations per Notification.	Number of Examinations.	Number of Notifications.	Number of Examinations per Notification.					
Ashford, East ... " Hospital...	14	21	40	139	244	14	17.7	1	1	0	17	10	1.7	12	2	278
Ashford, West ... " Hospital...	4	22	10	11	43	6	7.2	0	0	0	31	14	2.2	3	5	82
Blean ... " Hospital...	10	20	4	10	129	11	11.7	0	1	0	20	10	2.0	1	0	150
Bridge ... " Hospital...	10	8	0	2	69	16	4.3	0	0	0	5	5	1.0	14	2	90
Bromley ... " Hospital...	10	24	0	1	25	16	1.6	3	3	1	28	41	0.7	22	1	79
Cranbrook ... " Hospital...	11	30	12	930	1026	24	42.7	4	1	4	19	13	1.5	28	8	1085
Dartford ... " Hospital...	18	20	4	53	77	53	1.5	6	7	0.9	38	68	0.6	20	2	143
Dover ... " Hospital...	4	1	0	3	4	4	1.0	0	0	0	3	6	0.5	4	1	12
Eastry ... " Hospital...	7	6	2	1	37	8	4.7	1	1	1.0	22	20	1.1	1	6 { 5 1	67
Elham ... " Hospital...	7	8	1	0	9	1	9.0	1	1	1.0	6	6	1.0	11	0	27
Faversham ... " Hospital...	8	40	5	117	475	67	7.1	3	3	1.0	23	18	1.3	9	5	515
Hollingbourn ... " Hospital...	12	15	8	3	17	7	2.4	1	0	—	20	20	1.0	1	3	42
Hoo ... " Hospital...	3	0	0	0	3	2	1.5	0	0	0	10	6	1.7	0	0	13



Maidstone Hospital	11	18	0	2	69	16	4.3	1	0	—	24	20	1.2	3	0	0	97
” Malling Hospital	—	1	48	0	0	21	4.6	4	1	4.0	42	57	0.7	25	1	8	175
” Milton Hospital	—	9	27	10	95	45	1.5	4	5	0.8	22	18	1.2	17	9	1	121
Romney Marsh Hospital	12	30	10	0	68	1	71.0	0	0	0	1	1	1.0	4	0	0	76
” Sevenoaks Hospital (Hever)	—	4	63	4	71	56	20.5	3	0	—	54	41	1.3	13	0	2	1217
” Sheppey Hospital	—	53	17	832	1145	9	40.2	3	0	—	17	2	8.5	5	0	0	387
” Strood Hospital	—	2	212	0	362	14	.7	4	4	1.0	17	19	0.9	24	0	2	57
” Tenterden Hospital	10	0	0	0	10	7	3.3	0	1	0	3	6	0.5	3	0	0	29
Thanet Hospital	—	4	3	16	23	4	2.2	4	4	1.0	35	10	3.5	11	0	5	64
Tonbridge Hospital	22	8	0	1	9	17	5.5	5	6	0.8	30	30	1.0	1	0	1	131
” Hospital	—	6	42	0	94	17	5.5	4	6	0.8	30	30	1.0	1	0	1	131
TOTALS IN RURAL DISTRICTS	—	447	1160	2497	4104	419	9.8	48	39	1.2	487	441	1.1	232	12	54	4937

COMBINED HOSPITALS.

Bromley and Beckenham Joint Hospital	—	0	1	0	1	—	—	0	—	—	0	—	—	0	0	0	1
Isle of Thanet Joint Hospital...	—	0	127	0	127	—	—	1	—	—	0	—	—	0	0	0	128
St. William's Hospital, Rochester	—	5	86	0	91	—	—	4	—	—	1	—	—	0	0	0	96
Keycol Hospital, Bobbing	—	0	767	1	768	—	—	16	—	—	2	—	—	0	0	1	787
Deal and Walmer Hospital	—	0	0	0	0	—	—	0	—	—	0	—	—	0	0	0	0
Dartford Joint Hospital	—	0	0	0	0	—	—	0	—	—	0	—	—	0	0	0	0
Tonbridge Hospital	—	0	0	0	0	—	—	0	—	—	0	—	—	0	0	0	0
TOTAL COMBINED HOSPITALS	—	5	981	1	987	—	—	21	—	—	3	—	—	0	0	1	1012
Total Urban Districts	—	1214	1726	1272	4212	1162	3.6	237	171	1.4	1507	1113	1.3	551	91	271	6869
Total Rural Districts	—	447	1160	2497	4104	419	9.8	48	39	1.2	487	441	1.1	232	12	54	4937
Total Combined Hospitals	—	5	981	1	987	—	—	21	—	—	3	—	—	0	0	1	1012
Examinations for Military authorities (not included in above)	—	20	1	7	28	—	—	5	—	—	85	—	—	0	0	0	118
GRAND TOTAL ...	—	1686	3868	3777	9331	1581	5.9	311	210	1.5	2082	1554	1.4	783	103	326	12936

TABLE 16.—Details of various specimens examined at the County Laboratory during 1916 :—

Examinations of swabs taken from contacts with cerebro-spinal meningitis .....	103
Examinations of cerebro-spinal fluid .....	35
Examinations of serum for <i>B. Para-typhosus</i> (agglutination ) ..	26
Examinations of urine for <i>B. Typhosus</i> ... ..	25
Examinations of faeces for <i>B. Typhosus</i> .....	25
Examinations of pus for <i>Gonococcus</i> ... .	19
Examinations of urine for tubercle bacilli .....	17
Examinations of serum for <i>B. Dysenteriae</i> (agglutination) ..	13
Examinations of pus for tubercle bacilli.....	13
Examinations of tissue (?) malignancy .....	9
Examinations of pus (?) organisms .....	7
Examinations of pleuritic fluid for tubercle bacilli .....	5
Examinations of milk for tubercle bacilli .....	4
Examinations of swab from cat's throat for <i>B. Diphtheriae</i> .....	3
Examinations of blood (?) organisms .....	2
Examinations of mice for <i>B. Diphtheriae</i> .....	2
Examination of tinned salmon (?) organisms.....	1
Examination of sub-maxillary gland from pig for tubercle bacilli .....	1
Examination of blood for "Count" .....	1
Examination of sputum for pneumococcus.....	1
Examination of blood for malarial fever.....	1
Testing virulence of <i>B. Diphtheriae</i> .....	1
Examination of swab from rabbit's throat for <i>B. Diphtheriae</i> .....	1
Examination of urine (?) organisms.....	1
Examination of swab from parrot's throat for <i>B. Diphtheriae</i> .....	1
Examination of ice cream (?) organisms .....	1
Examination of tissue (?) organisms.....	1
Examination of urine for <i>Gonococcus</i> .....	1
Examination of faeces for <i>B. Dysenteriae</i> .....	1
Examination of human larynx for <i>B. Diphtheriae</i> ..	1
Examination of urine for <i>B. Coli Communis</i> .....	1
Examination of milk for <i>B. Typhosus</i> ...	1
Examination of meat (?) horseflesh .....	1
Examination of ampoule (?) nature of contents.....	1
Total.. .....	326

ADMINISTRATION OF THE MIDWIVES ACT, 1902.

This Act has again been well administered during the year under review. The two whole-time inspectors of midwives, Miss Harrison and Miss Berry, employed by the County Council, have continued to carry out their duties in a praiseworthy manner. All midwives are visited at frequent intervals, and special visits are paid to those who report cases of inflammation of the eyes, puerperal fever, or infectious diseases, which have occurred in their practices. The inspectors have continued their efforts in trying to improve the education of those women who are certified, but who have not been trained. In my annual report for 1913 I gave a full account of this branch of the work.



Table 17 shows the number of midwives engaged in the County of Kent in each sanitary district, together with certain particulars respecting their qualifications:—

TABLE 17.—SHEWING THE NUMBER OF MIDWIVES IN THE COUNTY OF KENT IN EACH SANITARY AREA AT THE END OF 1916.

District.	Regis-tered.		Non-registered Maternity Nurses.	Certified Midwives on the register but not practising.	District.	Regis-tered.		Non-registered Maternity Nurses.	Certified Midwives on the register but not practising.
	Trained.	Bonâ-fide.				Trained.	Bonâ-fide.		
<b>Urban.</b>									
Ashford ... ..	3	—	1	1	Margate ... ..	6	—	5	4
Beckenham ... ..	1	2	7	—	Milton Regis ... ..	—	2	3	1
Bexley ... ..	3	1	3	—	New Romney ... ..	—	—	—	—
Broadstairs and St. Peter's ... ..	3	—	—	2	Northfleet ... ..	—	3	11	—
Bromley ... ..	2	1	10	—	Penge ... ..	1	1	11	—
Chatham ... ..	7	4	4	1	Queenborough ... ..	—	1	2	—
Cheriton ... ..	3	2	1	—	Ramsgate ... ..	3	—	3	—
Chislehurst ... ..	1	1	—	—	Rochester ... ..	9	4	1	2
Dartford ... ..	6	—	2	—	Sandgate ... ..	—	—	—	—
Deal ... ..	1	3	5	—	Sandwich ... ..	2	1	—	2
Dover ... ..	7	1	7	4	Sevenoaks ... ..	5	7	—	1
Erith ... ..	8	1	2	1	Sheerness ... ..	4	2	5	—
Faversham ... ..	2	1	—	—	Sittingbourne ... ..	2	—	—	—
Folkestone ... ..	6	3	11	3	Southborough ... ..	1	—	—	—
Footscray ... ..	1	2	5	—	Tenterden ... ..	—	—	1	—
Gillingham ... ..	11	2	3	1	Tonbridge ... ..	1	7	2	5
Gravesend ... ..	1	1	8	—	Tunbridge Wells ... ..	8	5	2	4
Herne Bay ... ..	2	—	2	1	Walmer ... ..	—	1	3	—
Hythe ... ..	2	—	4	1	Whitstable ... ..	1	—	7	1
Lydd ... ..	1	3	—	1	Wrotham ... ..	7	4	2	1
Maidstone ... ..	7	4	5	1		128	70	138	38
<b>Rural.</b>									
Ashford, East ... ..	4	4	3	—	Milton ... ..	—	1	7	—
Ashford, West ... ..	—	—	6	—	Romney Marsh ... ..	—	—	7	—
Blean ... ..	1	3	5	—	Sevenoaks .. ..	9	6	19	2
Bridge ... ..	5	3	9	—	Sheppey ... ..	2	1	6	—
Bromley ... ..	8	3	13	—	Strood ... ..	3	1	6	—
Cranbrook ... ..	3	—	5	1	Tenterden ... ..	—	—	1	—
Dartford ... ..	5	6	25	3	Thanet ... ..	3	—	6	—
Dover ... ..	4	5	6	2	Tonbridge ... ..	13	3	7	2
Eastry ... ..	2	1	18	—					
Elham ... ..	—	—	2	—	Rural ... ..	77	67	183	14
Faversham ... ..	4	1	2	—	Urban ... ..	128	70	138	38
Hollingbourn ... ..	3	1	11	—					
Hoo ... ..	—	6	3	—	Total ... ..	205	137	321	52
Maidstone ... ..	4	5	10	1					
Malling ... ..	4	17	6	3					



It will be seen that there are altogether 342 certified midwives on the present register, and of this number fifty-two are certified women who do not act as midwives. Many of these latter notify their intention to practise only in cases of emergency. The unregistered maternity nurses number 321.

NOTIFICATIONS RECEIVED FROM MIDWIVES.—The requirements of the Central Midwives Board in regard to the various notifications which midwives are required to forward to the Local Supervising Authority are being much better observed than formerly. To some extent this may be accepted as an indication of improvement in methods of practice. The notifications for the years 1915 and 1916 are set out in the following table:—

	1915.				1916.		
	District.		Total.		District.		Total.
	North- west.	South- east.			North- west.	South- east.	
Still-births .....	131	75	206	...	147	74	221
Deaths before arrival { mother .....	1	1	2	...	1	—	1
of doctor ..... { child .....	17	10	27	...	17	5	22
Medical help for mother .....	357	285	642	...	396	276	672
„ „ child .....	272	107	379	...	250	139	389
Notice of having laid out a dead body.....	47	21	68	...	50	16	66
Letters forwarded by County Medical Officer drawing attention to breaches of rules ..	10	5	15	...	5	7	12
Letters received explaining failure to comply with the rules ...	14	3	17	...	9	17	26
Letters of enquiry received .....	3	16	19	...	22	20	42

DETAILS RESPECTING THE NUMBER OF MIDWIVES :—

	North-west District.	South-east District.
Number of midwives on the register on January 1st, 1916.....	232	173
Deaths during the year... ..	6	1
Midwives who were not practising, or who were working in Institutions and not subject to supervision .....	12	31
Resigned during the year.. ..	6	7
Removed out of county.....	28	26
Certificates cancelled.....	1	—
Additional midwives who notified their intention to practise during the year .....	8	4
Number of midwives practising at end of year... ..	178	112
Total number on the Register in the County of Kent—December 31st, 1916 .....	199	143

PUERPERAL FEVER.—The number of cases of puerperal fever notified has decreased by four, compared with the previous year. In 1915 the total was thirty-four, whilst in the year under review it was thirty. As regards

cases attended by midwives alone, the numbers have decreased from fifteen to seven.

	North-West.	South-East.	Total.
Cases notified .....	15	15	30
Attended by Midwives alone ... .	3	4	7
„ Doctors.....	8	9	17
Attended by Midwives as Nurses .....	4	2	6

AMOUNT OF WORK CARRIED OUT BY MIDWIVES.—From enquiries made from each registered midwife, it has been ascertained that 8,657 births were attended by midwives alone. The total number of births registered in the administrative County of Kent during the year 1916 was 21,383.

The following particulars are important as affecting the supply of midwives in the county :—

134	midwives	attended	25	cases	or	less.
54	„	„	26	to	50	cases.
28	„	„	51	to	75	„
11	„	„	76	to	100	„
12	„	„	101	to	125	„
4	„	„	126	to	150	„
7	„	„	151	to	175	„
6	„	„	176	cases	upwards.	

The number of midwives who attended twenty-five cases or less is very striking, as also is the approximation of the total figures to those of the previous year, the numbers showing only slight variations.

VISITS PAID BY INSPECTORS.—The following is a summary of the visits made by the inspectors in each district :—

	DISTRICTS.	
	North-West.	South-East.
Total visits paid by inspectors ... ..	754	710
Inspections of midwives and unregistered women—		
Bonâ-fide women ... ..	200	131
Trained women ... ..	209	234
Unregistered women ... ..	4	4

The difference between the number of visits and the number of inspections, is accounted for by special visits, e.g., to patients who have been attended by unsatisfactory midwives; to ascertain whether satisfactory disinfection had been carried out by midwives who had attended cases of puerperal fever, etc.; to midwives when associated with a patient suffering from a high temperature or where the baby has suffered from inflammation of the eyes; inquiries into the practice of uncertified women; attendance at Court and at the Penal Committee meetings of the Central Midwives Board; and interviews with persons interested, in various ways, in the administration of the Midwives Act.

The following tabulations shew the notifications received from midwives during each of the years 1909 to 1916, inclusive, together with various other details for the seven years. Appended also are particulars of the penal cases (reported to the Central Midwives Board) in each inspector's area, and detailed lists of the complications which necessitated midwives sending for medical help during the year 1916.

NORTH AND WEST KENT (MISS HARRISON).

Notifications received.	1909	1910	1911	1912	1913	1914	1915	1916
Medical help for mother .....	143	306	290	372	354	382	357	396
„ „ child .....	37	74	127	163	196	267	272	250
Still-births.....	100	150	149	162	149	165	131	147
Death of mother .....	1	—	1	1	3	—	1	1
„ child .....	15	16	30	21	20	13	17	17
Total No. of Midwives at end of year	225	248	218	217	222	251	232	199
Certificates cancelled by Central Midwives Board (1909–1916).....								23
Midwives censured „ „ „ „ .....								6
Total penal cases .....								29
No. of women prosecuted for practising as midwives (1909–1916) ...								21
„ midwives „ not notifying intention to practise „ ...								1
Of the 225 midwives at the end of 1909, 75 were trained and 150 were “ <i>bonâ-fide</i> .”								
„ 199 „ „ 1916, 112 „ 87 „								

PENAL CASES (1916).—1. Failing to notify to the Local Supervising Authority the death of a child occurring before a medical practitioner saw the child. Failing to swab the patient and to continue in attendance for ten days. Failing to keep a record of her cases in her register, and of her patient's temperature and pulse. Failing to advise medical help and to notify that medical help had been sought. Result—Certificate cancelled

2. Failing to take and record the pulse and temperature of her patients. Failing to advise medical help, and to notify the same, when there was inflammation of, and discharge from, the child's eyes. Failing to swab her



SUMMARY OF REASONS OF SENDING FOR MEDICAL HELP (1916):—

Eclampsia .....	7
Abortions .....	29
Inertia .....	64
Abnormal labours (? obstructed).....	40
Anti-partum hæmorrhage .....	29
Post-partum hæmorrhage.....	13
Torn perineum .....	71
Rise of temperature .....	31
Retained placenta .....	30
Abnormal presentations .....	30
Vaginal discharge .....	5
Miscellaneous illness.....	47

Total..... 396

Skin trouble .....	11
Inflammation of the eyes .....	117
Convulsions .....	7
Deformities.....	20
Dangerous feebleness.....	88
Miscellaneous .....	7

Total..... 250

Notifications received.	1909	1910	1911	1912	1913	1914	1915	1916
Medical help for mother ...	121	227	226	287	325	333	285	276
„ „ child.. ...	41	88	126	141	155	172	107	139
Still-births.....	38	74	85	87	75	86	75	74
Death of mother . . . . .	1	—	4	1	2	—	1	—
„ child .....	7	10	17	16	11	11	10	5
Total No. of midwives at end of year .....	115	113	166	176	166	195	173	143

Certificates cancelled by Central Midwives Board (1909–1916) ..... 16

Midwives censured	„	„	„	„	„	.....	2
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Total penal cases .....	18
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No. of unregistered women prosecuted for practising as midwives (1909–1916) .....	11
,, midwives prosecuted for not notifying intention to practise .....	1
Of the 115 midwives at the end of 1909, 40 were trained and 75 were <i>bonâ fide</i> .	
,, 143 ,, ,, 1916, 93 ,, 50 ,, ,,	

PENAL CASES (1916).—1. Failing to use the prescribed form and failing to advise medical help sufficiently early. Failing to notify the Local Supervising Authority when the advice of a medical practitioner had been sought. Failing to notify to the Local Supervising Authority the fact of having laid out a dead body. Result—Certificate cancelled.

2. Failing, as soon as the child's head was born, to cleanse the eyelids carefully. Failing to advise medical help when there was inflammation of, and discharge from, the child's eye. Failing to use the prescribed form when medical help was sought. Failing to attend for a period of ten days. Result—Certificate cancelled.

#### SUMMARY OF REASONS OF SENDING FOR MEDICAL HELP (1916) :—

##### For the mother :—

Rise of temperature .....	17
Retained placenta .....	16
Illness of patient .....	9
Anti-partum hæmorrhage .....	6
Post-partum hæmorrhage.....	16
Eclampsia .....	1
Ruptured perineum .....	51
Obstructed labour .....	48
Uterine inertia .....	20
Abortions .....	9
Mal-presentation .....	25
Complications during puerperium .....	28
Miscellaneous .....	30
	<hr/>
	276

##### For the child :—

Premature and feebleness .....	48
Pemphigus .....	6
Inflammation of eyes.....	50
Deformities.....	6
Convulsions .....	3
Tongue tie .....	4
Miscellaneous.....	22
	<hr/>
	139

## MATERNITY AND CHILD WELFARE.

During 1916 a comprehensive scheme for the administration of the Notification of Births Acts by the County Council, in those districts in Kent where no health visitors had been appointed previously by the local district councils was put into operation. Several additions have been made during 1917, and the complete list of districts served and their groupings for the purpose of the appointment of health visitors, are as follows :—

DISTRICT No. 1.—Elham Rural, Bridge Rural, Sandgate, Cheriton and Hythe. Population census 1911, 35,426. Acreage, 83,148. Whole-time health visitor, Miss M. S. Orpin.

DISTRICT No. 2.—Southborough, Tonbridge, the parish of Knockholt in the Bromley Rural District and parts of Sevenoaks Rural (parishes of Brasted, Dunton Green, Halstead, Riverhead, Seal, Sundridge and Westerham). Population census 1911, 33,593. Acreage, 66,653. Whole-time health visitor, Miss A. M. Hutchins.

DISTRICT No. 3.—Eastry Rural, Dover Rural, Deal and Walmer. Population census 1911, 40,002. Acreage, 72,905. Whole-time health visitor, Mrs. A. Smithson.

DISTRICT No. 4.—Blean Rural, Thanet Rural, Faversham Borough and Eastern portion of Faversham Rural (parishes of Boughton Blean, Dunkirk, Goodnestone, Graveney, Herne Hill and Faversham Without). Population census 1911, 41,035. Acreage, 61,646. Whole-time health visitor, Miss F. E. Grant. (Herne Bay was added to this district [population and acreage included above] at a later date, as a temporary measure pending other councils coming into the county scheme and the division of the augmented area into two districts, with a whole-time health visitor for each).

DISTRICT No. 5.—Western portion of Faversham Rural (parishes of Baddlesmere, Buckland, Davington, Doddington, Eastling, Leaveland, Luddenham, Linstead, Newnham, Norton, North Preston, Oare, Ospringe, Sheldwich, Stalisfield, Stone, Selling, South Preston, Throwley and Teynham). Population census 1911, 9,664. Acreage, 29,429. Part-time health visitor, Miss B. E. Dockrill. Two days per week are devoted to health visiting in this area, and the remainder of the nurse's time is occupied in school nursing (two days) and tuberculosis nursing (one and a half days) in Queenborough, Sheerness and the Isle of Sheppey.



DISTRICT No. 6.—Malling Rural and Wrotham. Population census 1911, 28,402. Acreage, 47,341. Whole-time health visitor, Miss B. F. Miles.

DISTRICT No. 7.—Maidstone Rural and Hollingbourn Rural. Population census 1911, 28,830. Acreage, 92,666. Whole-time health visitor, Miss A. Stanford.

DISTRICT No. 8.—Tenterden Borough, Tenterden Rural and Cranbrook Rural. Population census 1911, 23,069. Acreage, 88,639. Part-time health visitor, Miss L. M. Thomas. Four days per week are devoted to health visiting, and the remainder to school nursing in this area, together with the districts of New Romney, Lydd and Romney Marsh.

DISTRICT No. 9.—Strood Rural and Hoo Rural. Population census 1911, 19,319. Acreage, 52,225. Part-time health visitor, Miss F. Barnes. Four and a half days per week are devoted to health visiting and one day to school nursing.

DISTRICT No. 10.—Romney Marsh, New Romney and Lydd. Population census 1911, 6,004. Acreage, 43,822. Part-time health visitor, Mrs. E. M. Busck. Mrs. Busck is superintendent of the local nursing association, and devotes three days a week to the work of health visiting.

DISTRICT No. 11.—Sevenoaks Rural District (parishes of Chiddingstone, Chipstead, Cowden, Chevening, Edenbridge, Hever, Kemsing, Leigh, Markbeece, Otford, Penshurst, Shoreham, Weald). Population census 1911, 13,176. Acreage, 41,641. The health visiting in this area is undertaken by the nurses working under the Kent County Nursing Association.

DISTRICT No. 12.—Bromley Rural District (with the exception of the parish of Knockholt). Population census 1911, 21,015. Acreage, 27,138. The health visiting in this area is undertaken by the nurses working under the Kent County Nursing Association.

DISTRICT No. 13.—Footscray Urban. Population census 1911, 8,493. Acreage, 2,043. The health visiting in this area is undertaken by the nurse working under the Footscray and Sidcup Nursing Association.

DISTRICT No. 14.—Chislehurst Urban. Population census 1911, 8,666. Acreage, 2,791. The health visiting in this area is divided between the Chislehurst Nursing Association (upper portion of district) and

the Footscray and Sidcup Nursing Association (lower portion of district).

Health visiting in districts No. 1, 2, 4, 6, 8 and 11, commenced during the latter part of 1916, in districts 3, 5, 7 and 10 on January 1st, 1917, and in districts 9, 12, 13 and 14 at a later date in 1917.

The whole-time nurses receive a salary of £100 each per annum, with an allowance for travelling and uniform of £30 per annum in addition.

The duties of the health visitors are as follows:—

- (1) To visit homes where births have occurred, as soon as possible after the tenth day from birth. No visits to be paid to houses where a servant is employed. Each mother visited is given verbal instructions and advice, together with a copy of the "Feeding of Infants" leaflet.
- (2) To pay subsequent visits at about two monthly intervals until the child is twelve months old, at quarterly intervals during the second year and about twice yearly during the third, fourth and fifth years.
- (3) To investigate the circumstances attending deaths of children under one year of age.
- (4) To investigate and report upon still-births.
- (5) To keep and file records as instructed.
- (6) To keep a daily diary of her work and to send to the County Medical Officer monthly and annual reports, also special reports as required.
- (7) To carry out any other duties affecting public health or maternity and child welfare as required.

Particulars of all births notified are filled in at the heading of the inquiry cards at my office, and the cards are distributed to the health visitors at the end of each week; to ensure uniformity each health visitor is instructed, in detail, respecting the filling in of all the particulars on the inquiry cards. Each health visitor is supplied with a complaint book on which to report (a) any infringements of the rules of the Central Midwives Board by midwives, (b) the practise of midwifery by unqualified persons, (c) all sanitary defects noted at the homes visited, (d) all cases in which it is deemed necessary that a report to the National Society for the Prevention of Cruelty to Children is called for and (e) other matters as may be deemed necessary.

Special inquiry cards are filled in relating to still-births, and particulars of all births not notified are reported to the County Medical Officer.

As the scheme did not commence until late in 1916, no information of interest relating to the work carried out is available.

The above particulars apply only to those districts and health visitors which come within county administration. The Notification of Births Acts in the remaining districts in the county are administered by the local district councils as follows :—

(i.) *Districts employing a whole-time Health Visitor.*—Beckenham, Bexley, Broadstairs, Bromley, Chatham (one whole-time and one part-time), Dartford, Dover, Erith, Folkestone, Gravesend, Maidstone, Margate, Milton Regis (in combination with Sittingbourne and Milton Rural), Penge (one whole-time and one part-time), Ramsgate, Rochester, Sheerness (in combination with Queenborough and the Isle of Sheppey), Tunbridge Wells (two whole-time visitors), Dartford Rural (two whole-time and one part-time).

(ii.) *Districts employing Part-time Health Visitors.*—Ashford, Gillingham, Northfleet, Sandwich, Sevenoaks, Whitstable, East Ashford Rural (six part-time visitors), West Ashford Rural and Tonbridge Rural (eleven part-time visitors).

The following district councils in Kent have established centres in connection with maternity and child welfare, or such centres have been established in their districts by voluntary agencies :—

Beckenham—Average weekly attendance, 16.

Broadstairs—Ditto 24.

Bromley—The local Health Society have established a crèche and weighing centre, at which the Council's health visitor gives assistance.

Chatham—Opened in 1917.

Dartford—Average weekly attendance, 20.

Dover—Ditto, 30.

Erith—Opened in 1917.

Folkestone—Average weekly attendance, 8,

Gravesend—Opened in 1917.

Maidstone—Average weekly attendance, 36.

Margate—Ditto, 45.

Penge—Ditto, about 20.

Ramsgate—Ditto, 40 to 70.

Sandwich—Ditto, 10.

Sevenoaks—Opened in the latter part of the year, and carried on by private enterprise.

Sheerness (for Sheerness and Queenborough)—Average weekly attendance, 3·25.



Sittingbourne (for Sittingbourne, Milton Regis and parts of Milton Rural)—

Average weekly attendance, 2·5.

Southborough—Two voluntary infant welfare centres.

Tunbridge Wells—Average weekly attendance, about 9.

Wrotham—Voluntary infant welfare centre.

Dartford Rural—Eight maternity centres. Average weekly attendance varies from 12 to 17.

Milton Rural (Rainham)—Average weekly attendance, about 8.

The County Council have also established a maternity centre at Tonbridge during 1917, and it is hoped to establish others as opportunities occur, although the districts in which they administer the Act are principally those with small urban or scattered rural populations.

The following extracts from the reports of the district medical officers of health are very interesting, as showing the varying activities undertaken by child welfare centres, or “mothercraft” clubs.

*Margate.*—The Mothercraft Centre, where about forty-five mothers and forty-five children attend every Monday, and any stray ones can (and do) come for advice is a great help in making known their condition to the medical officer of health, and the health visitor. Although our Monday afternoons are crowded (there being about 120 names on the books), there ought to be a still larger attendance of healthy and delicate children. The work of the five ladies who kindly visit in the homes has done much in bringing our plans to the notice of old and new residents in Margate. The other voluntary workers who have helped us from the beginning still continue their useful labours, and never fail in their weekly attendance at the centre, to take the names, mind the toddlers, conduct the stalls and the teas, to weigh the babies, and make themselves useful in any way they can to the mothers. The needlework stall, under Miss Gray's management, provides hundreds of garments in the course of the year, which are sold very cheaply to the mothers. From her average takings of about ten shillings per week she not only provides stock, helped by gifts from friends, but gives grants of all sorts of mothercraft needs, doubly welcome, as there are no regular funds for little expenses connected with the working of the centre. Miss Maynard's literature stall is excellent in every way, and we hope the mothers will get to appreciate it, and use it more. Under Miss Court's superintendence 537 weighings took place during the year, and the weight charts are a capital guide as to the well-being of the children. Mrs. McCombe's ever welcome teas have been, as usual, much enjoyed. By far the most valuable work of the centre is what goes on in the little consultation room, which the medical officer of health regularly visits, and 227 consultations took place there last year, the work being supplemented by the home visits of the health visitor. During the

winter months the council arranged for the lectures to be given on another afternoon in the week, and from the beginning of November to the end of December ten lantern lectures were given by the health visitor on Thursdays, and twenty-nine homely talks and one demonstration on the Monday afternoons. Miss Boldero also gave five and Miss Aylward six talks (both these ladies being trained nurses and midwives) and Mrs. Hatfeild has given us three lectures. Miss Staff, from Canterbury, and Miss Wyatt, from the Ramsgate Mothercraft Centre, gave us two capital demonstrations of the right and wrong way of washing babies, in which the mothers were very interested. Three entertainments were provided in holiday times by Mrs. Hardy and friends, and made a pleasant break in the regular routine. A grant of £5 from the Education Committee covered the expenses of the lantern lectures, demonstrations, and £2 from the Mickelburgh Charity, for help to necessitous nursing mothers, provided nourishment for ten cases.

A start was made in December of a dinner fund, kept going chiefly by the contributions of the mothers themselves, and a few friends. Miss Aylward kindly has the dinners cooked in her own house, and they are fetched and taken to the homes, where they are generally eaten by the mothers before they are up after their confinements, but they are available at other times, twenty-eight were provided in December.

The chief event of our year is the annual baby show, the first of which was held at the Pavilion last June, and was a great success. The Mayor and Mayoress presented the prizes and contributed generously to the £15 10s. which was collected for the purpose from various friends and given to the mothers in the form of orders to tradespeople in the town. There were nearly one hundred entries, and there were eight classes, many of these having several divisions. The interesting part was the delicate babies' section, prizes being given to the mothers whose little ones had made the most progress after illness of all sorts. Margate was the first show to offer this encouragement to the careful mothers, but the idea has now been adopted in several places. All the judging was done by nurses, and the delicate children had been attending at the centre for some time before the show. Photographs were taken of groups of prize-winners, and others afterwards, and these were made into lantern slides, where they were most instructive in illustrating some of the winter lectures. The local press helped us very much, and accounts of the show were given in the nursing papers, one of which published pictures with the report, and gave all the notes of the delicate prize-winners. The mothers are keenly interested in the competitions, and are already talking about the next show, when we hope to get a still larger number of entries.

*Ramsgate.*—The co-operation between the work undertaken by the local authority, and that of the mothercraft club, a most important voluntary agency, is very close.



The health visitor, who is a trained and certified midwife, is also the nurse superintendent of the mothercraft. Half her salary is paid by the local authority and the other half by the voluntary agency. From the two committees of the local authority interested in child welfare, namely, the Sanitary and the Education Committees, a representative member (in each case a woman) has been appointed a member of the Mothercraft Committee. Lastly, the medical officer of health, who is also the school medical officer, is medical officer to the mothercraft and a member of their executive committee.

The health visitor's primary work is under the Notification of Births Act. Having knowledge of all mothers and babies in the borough, she is able to advise them, if there is no doctor in attendance, to attend the mothercraft consultation held once a week. No treatment is given there. If a mother or child should require treatment, the mother is told to call in her own doctor. Naturally the chief teaching given is in relation to feeding. Expectant mothers, babies and children under five years of age can attend this consultation. On another afternoon in the week the mothercraft club is open for other than purely medical purposes. Mothers are taught how to cut out and make children's clothes, &c. They listen to simple, short lectures on such subjects as breast-feeding, vaccination, vermin, backyards, &c. My experience is that these lectures cannot be made too simple and blunt, and are of infinitely more use than leaflets. One felt that he was amply compensated when the mother of twin babies expressed regret after one of these lectures that she had got exemption from vaccination for her babies, and that she would now have them vaccinated. Breast-feeding is taught in season and out of season. If no other argument is of any avail, mothers are told that breast-feeding costs less money. The results given below are distinctly encouraging. The number of breast-fed babies has slowly but surely increased. The figures do not refer to all the five hundred babies born in the borough during any one year, as some were lost sight of before they were six months old ; some died and others had left the district.

Of babies born during 1913, 59% were breast-fed for six months or longer.

„	„	1914, 60%	„	„	„
„	„	1915, 62%	„	„	„

Another voluntary agency, namely, the Central Help, gives important assistance in child welfare. During the year they supplied sixteen babies with one pint of fresh milk daily. The health visitor recommends cases to the medical officer of health, who, after making investigations, recommends the cases for assistance by the Central Help Society. If the baby is breast-fed the mother drinks the milk supplied herself.

A full share of attention is paid to babies, illegitimate or otherwise, placed out with foster-mothers.



PUBLIC HEALTH (MILK AND CREAM) REGULATIONS, 1912.

In accordance with the circular of the Local Government Board, dated October 17th, 1913, I beg to report as follows on the administration of the above Regulations in the area under the jurisdiction of the County Council during the year 1916. I am indebted to the County Analyst for the information here contained :—

1.—*Milk and Cream (not sold as Preserved Cream).*

	(a) Number of samples examined for a preservative.	(b) Number in which a preservative was reported present.
Milk .....	1107	0
Skimmed Milk.....	8	0
Cream .....	17	6

2.—*Cream sold as preserved cream.*

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the labels as to preservatives were correct.

(i.) Correct statements made.....	20
(ii.) Statements incorrect .....	0
Total.....	20

(b) Determinations of milk fat in cream sold as preserved cream.

(i.) Above 35 % .....	20
(ii.) Below 35 % .....	0
Total.....	20

(c) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V. (1) and the proviso in Article V. (2) of the regulations have not been observed.

No such instances reported.

(d) Cases in which the Regulations have not been complied with.

Cream 177 Tonbridge	Contained 0·17 % boric acid.
„ 135 Elham	„ 0·23 % „
„ 3 „	„ 0·40 % „
„ 3a „	„ 0·27 % „
„ 142 „	„ 0·26 % „
„ 11 Wingham	„ 0·40 % „

3.—*Thickening Substances.*—No evidence of the addition of any of these substances to a sample of cream or preserved cream was observed.

4.—*Analyst's Observations, if any.*—The quantity of boric acid determined in the samples of preserved cream varied from 0·12 % to 0·6 %, the average amount being 0·35 %. On four occasions the quantity amounted to, or exceeded, 0·4 %. A few years ago it was of uncommon occurrence to find any sample of cream that contained more than 0·25 % of boric acid, whereas now this figure is invariably greatly exceeded.

### HOUSING, TOWN PLANNING, &c., ACT, 1909.

The value of this Act, particularly that portion which deals with the inspection of houses, is more evident as systematic work of the nature set out in the regulations framed by the Local Government Board proceeds, and housing accommodation is steadily improving.

The reports which have been received are, in several instances, not framed in accordance with paragraph 5 of the Regulations of the Local Government Board, and in these cases the desired information has been obtained by direct enquiry.

It would appear that 4,631 houses have been inspected under the Act in urban districts, and 2,483 in rural, both being considerable decreases as compared the previous year. 172 houses (100 urban and 72 rural) were considered to be unfit for human habitation and 89 closing orders (76 urban and 13 rural) were made. 58 premises (15 urban and 43 rural) were afterwards made habitable. In 2,514 premises (1,198 urban and 1,316 rural) the defects were remedied without the making of closing orders. In a number of the districts the operation of the Act has been suspended during the war, and this cause has also resulted, in many instances, in strictly limiting the inspections to houses presenting, or likely to present, defects requiring urgent attention. The shortage of labour and the cost and shortage of materials are factors which must necessarily be taken into account in dealing with owners of property at the present time.

The general character of the defects found to exist were principally as follows:—Dirty walls and ceilings; dampness of houses due to defective roofs, guttering, rain-water pipes, wall footings, chimneys, &c; defective floors; closets defective in structure, or insufficient in the number provided; defective soil pipes and drain ventilators; defective drains; absence of sinks; absence of sanitary dustbins; defective or insufficient yard paving; ventilation insufficient or absent (houses back-to-back or back-to-back in principle, etc.): insufficient water supply; and general dilapidation of premises.

The County Council appointed a county sanitary inspector during the last quarter of 1914 to assist in the supervision of housing conditions of the rural districts. He is at the present time on military service and detailed particulars of his work will be given in future reports after he resumes duty.

The following are extracts from certain reports of district medical officers of health, and refer to housing conditions generally:—

#### URBAN DISTRICTS.

*Bexley.*—I wish to call attention to the overcrowding which exists in the smaller property in this district.



There is on one hand the fact that the tenants (whose earnings are in most cases considerably enhanced in consequence of the war) still pay from six shillings to eight shillings per week rent, and sublet or take in lodgers at charges which, in the majority of cases, more than cover the original rent. This state of affairs leads to additional wear and tear on the houses.

On the other hand the landlords cannot keep the places up to the usual standard of repair by reason of the difficulty in obtaining labour for the work and the high cost of materials.

The position is a difficult one. The people must find accommodation, and one has, in the circumstances, considerable diffidence in pressing the landlords to reduce overcrowding or to execute work which, in ordinary times, would be regarded as quite necessary to secure proper housing conditions, and I wish the council to know of the difficulties which exist.

*Chatham.*—It is not always easy to state what constitutes overcrowding. The usual standard is two persons per room, taking the average class of house.

The billeting of soldiers leads in some cases to a form of overcrowding, especially in sleeping apartments. Thus, in houses with three bedrooms, the family are restricted to two rooms, or a living room is used for sleeping purposes. In cases where this occurs to an undesirable extent the soldiers are withdrawn. Again, there is a tendency for two or more families to share a house. Each case discovered has to be treated on its merits, and with due regard to the fact that there is a scarcity of houses.

*Cheriton.*—The inspector reports that the work of inspection has been considerably increased during the year, owing to a large number of inhabitants doing military washing, and it has been found in many cases that the home has been badly neglected. In some instances it has been found necessary to approach the military authorities to have permits cancelled before getting the house properly attended to.

*Erith.*—There is a great lack of housing accommodation in the district which is due to the great influx of munition workers, the district being a very important munition centre.

*Faversham.*—Owing to large numbers of munition workers, accommodation is strained to the utmost. We are vigilantly looking out for overcrowding, and several cases have been taken in hand and remedied.

*Folkestone.*—It is practically impossible to acquire housing accommodation for families displaced by closing order.



*Gillingham.*—There are several houses that I consider unfit for habitation, but as the council have suspended the operation under the Act during the war, they are still inhabited.

*Gravesend.*—The closing down of small property is not being replaced by new cottages, and workmen's dwellings are very necessary.

*Maidstone.*—More housing accommodation is required.

*Margate.*—There is a large number of empty houses in the borough. Many houses have become occupied by more than one family for the sake of economy, and I am glad to say that this has resulted in practically no nuisance from overcrowding, etc., being brought to our notice.

*Sheerness.*—House accommodation is insufficient and overcrowded on space in Blue Town and Mile Town areas. Rents are very high, but the council decided in November, 1913, that the need is being adequately met by private enterprise.

#### RURAL DISTRICTS.

*Ashford, East.*—No new houses are being erected, owing to the high cost of labour and materials, and the same causes make it difficult to obtain any improvements as to the sanitary condition of existing houses.

*Dartford.*—In many of the rural parishes a number of cottages are urgently needed, mostly for agricultural tenants. In Stone and Swanscombe better cottages, say at ten shillings per week, are required for skilled workers, and more houses are required in Crayford.

*Hollingbourn.*—Great need of more cottages.

*Hoo.*—Owing to the increased population on account of the war, additional housing accommodation is needed in various districts—about 125 houses would meet the present need.

*Malling.*—The standard of houses unfit for habitation will become more stringent after the war; houses are needed in most parishes, perhaps most noticeably in Ightham and East Peckham.

*Sheppey.*—Owing to existing conditions, *i.e.*, so many soldiers' wives being in the district, there is a slight tendency to overcrowding, but it is being carefully watched.

*Strood.*—Housing accommodation is insufficient in the parishes of Cliffe and Frindsbury.

TABLE 18.—Showing the number of houses inspected under, and for the purposes of, Section 17 of the Housing, Town Planning, &c. Act, 1909, in the Urban Districts of the County of Kent.

DISTRICT.	Number of dwelling-houses inspected.	Number of dwelling-houses which were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation.	Number of representations made to the local authority with a view to the making of closing orders.	Number of closing orders made.	Number of dwelling-houses, the defects in which were remedied without the making of closing orders.	Number of dwelling-houses which, after the making of closing orders, were put into a fit state for human habitation.
Ashford ... ..	171	—	—	—	103	—
Beckenham ... ..	—	—	—	—	—	—
Bexley ... ..	—	—	—	—	—	—
Broadstairs and St. Peter's	30	2	1	1	4	—
Bromley (Borough)...	166	—	—	—	81	—
Chatham (Borough) ...	17	17	17	17	—	5
Cheriton ... ..	227	2	2	2	143	2
Chislehurst ... ..	—	—	—	—	—	—
Dartford ... ..	595	—	—	—	352	—
Deal (Borough) ... ..	332	1	1	—	23	—
Dover (Borough) ... ..	150	20	20	20	119	3
Erith... ..	720	—	9	—	53	—
Faversham (Borough) ...	164	—	—	—	91	—
Folkestone (Borough) ...	3	3	3	3	1	—
Footscray ... ..	—	—	—	—	—	1
Gillingham (Borough) ...	Operation of Act suspended during the war					
Gravesend (Borough) ...	71	14	14	14	—	—
Herne Bay ... ..	47	5	—	—	5	—
Hythe (Borough) ... ..	72	—	—	—	48	—
Lydd (Borough) ... ..	5	—	—	—	5	—
Maidstone (Borough) ...	—	—	1	1	—	—
Margate (Borough) ... ..	9	9	1	—	9	—
Milton Regis ... ..	House to House inspection not carried out during the year					
New Romney (Borough) ..	—	—	—	—	—	—
Northfleet ... ..	100	—	—	—	60	—
Penge ... ..	—	—	—	—	—	—
Queenborough (Borough) ..	—	—	—	—	1	—
Ramsgate (Borough) ... ..	Operation of Act suspended during the war					
Rochester (City) ... ..	13	1	1	1	—	—
Sandgate ... ..	195	—	—	—	—	—
Sandwich (Borough) ... ..	32	—	—	—	7	—
Sevenoaks ... ..	—	—	—	—	—	—
Sheerness ... ..	1220	16	7	7	9	2
Sittingbourne ... ..	154	—	—	—	46	—
Southborough ... ..	18	8	8	8	10	—
Tenterden (Borough) ...	—	—	—	—	—	—
Tonbridge ... ..	—	—	—	—	—	—
Tunbridge Wells (Borough)	Cases dealt with under P. H. Acts when necessary					
Walmer ... ..	118	—	—	—	28	—
Whitstable ... ..	2	2	2	2	—	2
Wrotham ... ..	—	—	—	—	—	—
Total Urban ... ..	4631	100	87	76	1198	15

TABLE 19.—Showing the number of houses inspected under, and for the purposes of, Section 17 of the Housing, Town Planning, &c. Act, 1909, in the Rural Districts of the County of Kent.

DISTRICT.				Number of dwelling-houses inspected.	Number of dwelling-houses which were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation.	Number of representations made to the local authority with a view to the making of closing orders.	Number of closing orders made.	Number of dwelling-houses, the defects in which were remedied without the making of closing orders.	Number of dwelling-houses which, after the making of closing orders, were put into a fit state for human habitation.
Ashford, East	...	...	...	38	1	1	1	—	1
Ashford, West	...	...	...	123	45	1	—	—	—
Blean...	...	...	...	44	—	—	—	28	—
Bridge	...	...	...	40	10	10	10	5	—
Bromley	...	...	...	—	—	—	—	—	—
Cranbrook	...	...	...	113	—	—	—	22	—
Dartford	...	...	...	297	10	10	2	170	*42
Dover	...	...	...	67	—	—	—	11	—
Eastry	...	...	...	2	2	—	—	2	—
Elham	..	...	...	26	—	—	—	26	—
Faversham	...	...	...	552	1	—	—	459	—
Hollingbourn	...	...	...	365	—	—	—	141	—
Hoo	...	...	...	3	3	—	—	—	—
Maidstone	...	...	...	58	—	—	—	35	—
Malling	...	...	...	384	—	—	—	176	—
Milton	...	...	...	129	—	—	—	90	—
Romney Marsh	...	...	...	—	—	—	—	—	—
Sevenoaks	...	...	...	—	—	—	—	—	—
Sheppey	...	...	...	251	—	—	—	?	—
Strood	...	...	...	Operation of Act practically suspended during the war					
Tenterden	...	...	...	—	—	—	—	—	—
Thanet	...	...	...	—	—	—	—	—	—
Tonbridge	...	...	...	—	—	—	—	151	—
Total in Rural Districts...				2483	72	22	13	1316	43
,, Urban ,,				4631	100	87	76	1198	15
Total for County				7114	172	109	89	2514	58

\* Relates in part to cases carried forward from 1915.

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## RIVERS POLLUTION.

Practically no comment is made in the district reports concerning this question, and there appears to be no great cause for complaint at the present time. The Medway is polluted by several towns at or near the mouth of the river, but schemes of sewage disposal have been proposed and will be put in hand in due course which will remedy the condition as far as possible.

## SANITATION OF HOPPER ENCAMPMENTS.

During the year 1916, these huts were inspected regularly and efficiently in the various districts. The water-supply was kept under close supervision, and more attention has continued to be paid to lighting and ventilation than formerly. For the most part the regulations were followed satisfactorily.

## UNSOUND FOOD.

The question of unsound food was dealt with fully in my 1913 report, as regards the general action taken in the different districts with respect to discovery and condemnation.

The following extract from the report of the medical officer of health of Ramsgate is of interest in this connection :—

“With reference to meat inspection, I should like to state that the East Kent Butchers’ Association during the year initiated a scheme of meat insurance, so that in event of any meat being condemned, the owner, by sending my surrender form to Secretary, is insured against financial loss. This system has already proved a success, and its adoption by other towns is recommended. To the cordial relations existing between the officials and members of the above Association and myself I wish to express my gratification.”

## WATER SUPPLIES AND SEWAGE DISPOSAL.

I do not intend to deal with these questions at length this year, but I append a few extracts from district reports relating to deficiencies and improvements :—

### WATER SUPPLIES :—

*Chatham.*—A new pumping station is under construction.

*Gillingham.*—The water company are extending their mains to Twyde.

*Penge.*—The medical officer of health again draws attention to the unfortunate practice of the Metropolitan Water Board in cutting off supplies to houses for the non-payment of rates or on account of defective fittings.

*Sheerness.*—“The present water supply is on the ‘intermittent’ principle, and is derived from deep wells. The council have constructed a storage reservoir on the summit of Southdown Hill, near Halfway Houses, capable of containing 1,000,000 gallons of water, or three days’ supply. In addition to the supply of water from the old wells in Trinity Road, the council hope to supplement the yield by putting into operation the recently sunk deep well at Sheerness East, for which, by reason of the recent enteric outbreak of October, a loan has been sanctioned by the Treasury with the approval of the Local Government Board of £6,750 for the purposes of machinery and buildings. Samples of water taken from the upcast shaft of the well at Trinity Road have been bacteriologically examined on several occasions during the year and were found to be exceptionally pure.”

*Ashford, West.*—The Great Chart, Shadoxhurst and Kingsnorth water-supply scheme has now been completed, and a scheme is in hand to supply Egerton Forstal.

*Bromley Rural.*—“The question of a proper water supply and drainage to the bungalows at Biggin Hill has been the subject of a good deal of correspondence during the latter part of the year, and the matter was still under consideration at the end of December.”

*Hoo.*—“During the year great difficulty has arisen, owing to the great demand made by the Admiralty Station at Kingsnorth for a uniform water supply to the civil population. At times many houses in the district have been entirely cut off. Both the Water Company and the Admiralty have been approached on several occasions that provisions should be made in order that the civil population should not suffer. The reason appears to be that the Water Company did not anticipate when laying the main from their waterworks at Higham, some miles away, such a great demand would be made, and until the Admiralty and the Water Company come to a definite understanding as to the amount required in the future, and therefore the necessity of increasing the size of the main, the question of the supply is at a deadlock. In the meantime the district is dependent on the Government Works taking into consideration the difficulty of the civil population and endeavouring to help them by restricting their demands, particularly at those times when water is used by them.”

*Maidstone Rural.*—An improved water supply for Chapel Estate, East Farleigh, is under consideration.

*Malling Rural.*—“Where spring water forms the supply it is usually good, but the well water is of more doubtful quality in many instances, and I hope after the war the supply from the Mid Kent Company may be



extended in several localities, notably at East Peckham and on Blue Bell Hill."

*Sevenoaks Rural.*—The Metropolitan Water Board have extended their mains to Ide Hill and Goathurst Common.

#### DRAINAGE AND SEWAGE DISPOSAL:—

*Dover.*—Electric motors have been installed at the sewage pumping station.

*Footscray.*—Owing to depletion of the staff, sewer flushing, except where automatic, has had to be discontinued.

*Hythe.*—A flood overflow sewer has been laid at Seabrook to deal with the storm-water from St. Martin's Plain and Dibgate camps.

*New Romney.*—There is no drainage system in New Romney, and Dr. Hick states:—

"If drainage had been adopted in 1902, when I pressed it, instead of the system advised by the sanitary inspector, the town would have been saved much money, as it is bound to come sooner or later, and if the present system is to be allowed to continue, a large additional expense must be incurred in making waterproof those cesspools which are not so.

"There appear to be many which are never emptied at all, and in these cases the orders of the council are ignored, so that those owners who were compelled to make watertight cesspools had to spend much money, an expense which the other landlords have escaped, and the tenants are saddled with a recurring cost which the others missed.

"I have constant complaints about the nuisance caused by the cart; it is inadequate, and as further cesspools are sealed it will become more and more so.

"According to the return made to me by the inspector, there are in the old town 226 houses with 143 cesspools, and fifty-three of these houses—four with baths—did not have the cesspools emptied at all last year.

"Others were emptied with varying frequency, from those holding two loads emptied once to one holding eight loads emptied six times. Of course the population of the houses varies.

"Manifestly many or most of these cesspools are not watertight, and must be reconstructed if the present system of sewage disposal is to continue.

"It is now argued that as we now get water from away, the pollution of the subsoil does not matter. This is an error. Apart from the fact that some people still drink subsoil water, it is proved that the pollution of the



subsoil, especially in a place like this where the level of the underground water varies so greatly from summer to winter, results in the formation of large bacterial breeding grounds in the dry weather with disastrous effects on the health and stamina of the inhabitants ”

*Sheerness.*—“ A water-carriage system of sewerage serves the whole of the district. Owing, however, to the absence of a continuous water-supply, and the expense of storage cisterns, there are still 1,900 houses in Sheerness without flushing cisterns to water closets. There is no treatment of sewage, which is held up in storage tanks and discharged at ebb tide into the Medway. The necessity of dealing with the main drainage of the district and with the sewerage pumping station has been accepted by the council, and energetic steps are being taken to deal with the matter in the near future.”

*Walmer.*—The new drainage scheme, referred to in previous reports, is now complete and the whole of the sewage of the district, including that from three barracks, is connected into it.

*Wrotham.*—“ The cesspool system of drainage is very unsatisfactory, especially in the Borough Green and Platt districts. The additional sewage from the soldiers billeted in the district during the first half-year made matters worse. Nuisances are often caused by the emptying of the sewage waggons, as no suitable place can be obtained for this purpose.

“ The sewerage and sewage disposal scheme is at a standstill owing to the war.”

*Bromley Rural.*—“ A temporary sewage disposal scheme has been constructed at West Wickham and is working satisfactorily, and it is hoped will suffice until the end of the war, when the permanent scheme already adopted can be carried out.”

*Malling Rural.*—“ The Leybourne camp sewage disposal works erected by the military authority, being placed close to the main road, the village church and the school, gave cause for great anxiety during its erection and on June 6th, I reported to you as follows :—

“ The sewage disposal works at Leybourne camp, which are being erected by the military authorities are now approaching completion and it is possible to form an opinion as to how the scheme will work. I believe that the works near the stream are likely to become a very serious annoyance to the neighbourhood and even a danger to the health of those living in the immediate locality.

“ I desire to place this opinion on record in order that you may, if you wish, make representations to those in authority before the works are completed and in use.

“During the autumn I made very frequent visits to the works, and told the school mistress and the rector (both living close by) that I was available to be sent for at any time if the nuisance was very bad.

“On the whole the nuisance, as I found it, was less than I expected, though on one occasion when sent for by Miss Peters, the schoolmistress, I met such a sewage laden atmosphere as would be distinctly prejudicial to the health of the children at school.”

The Maidstone borough sewage disposal works, which are situated at Aylesford, still give periodical cause for complaint.

*Sevenoaks Rural.*—A length of sewer has been reconstructed and an additional length of sewer laid at Otford.

### SCAVENGING.

My report for 1915 contained full details of the arrangements existing in each district in the county under this heading, and very few developments have taken place since then on account of the war. I append extracts from district reports in this connection :—

*Hythe.*—The corporation have obtained a fresh tip on which to dispose of refuse.

*Walmer.*—“Now that the Admiralty is calling upon the council to collect and dispose of the house-refuse from the three barracks in the district, the refuse destructor referred to in my last report becomes more necessary than ever. Having regard to your unanimous approval of the preliminary scheme for a destructor submitted by the surveyor in May, 1915, I trust the necessary works will be proceeded with as soon as circumstances permit.

“Last year I recommended the council to appeal to householders to burn such rubbish as is suitable so as to reduce the quantity of refuse to be collected, but nothing was done. I again recommend that such an appeal be made, as the co-operation of the public in this matter would substantially assist the work of collecting and disposing of the house-refuse.

“If firmly enforced, the byelaws with reference to the storing of house-refuse in properly covered sanitary bins will be a distinct improvement. At present all kinds of receptacles are used for the purpose, comparatively few are covered, so that the contents are exposed to the activities of dogs, cats, rats and flies.”

*Bromley Rural.*—Owing to shortage of labour, collections of refuse are made less frequently than formerly.



*Dartford Rural.*—A bi-weekly collection is needed in the growing parish of Crayford. This improvement has been highly successful in other villages in the rural district.

*Hollingbourn.*—A system of scavenging is needed in the larger parishes.

*Milton Rural.*—A weekly collection has been arranged in the parish of Murston.

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### THE WAR.

In common with the Public Health Departments of the other counties, that of Kent has been depleted considerably through members of my staff having volunteered for military service.

Of the medical staff of this department, the bacteriologist, the assistant school medical officer and three whole-time school medical inspectors have left in this way. The two former officials have not been replaced, but to carry out school medical inspection work three temporary whole-time officers—including one lady—have been appointed. One of the temporary school medical inspectors has since been appointed on the permanent staff to fill the vacancy caused by the death of Dr. Holmes on military service.

Two of the five tuberculosis officers have left similarly, and during their absence the work is being carried out willingly by the remaining three officers, assisted by two part-time tuberculosis officers.

The school dentist has left for foreign service, and he has been replaced by a temporary school dentist, whilst the county sanitary inspector, who has also enlisted, has not been replaced.

All the members of the clerical staff of the Public Health Department, with one exception, have been released for military duty, and thirteen lady clerks have been appointed temporarily. The only two males left on the permanent clerical and laboratory staff—Mr. F. Meakin, chief clerk, and Mr E. Arnold, chief laboratory assistant, are absolutely indispensable for the continuance of the work. They have again shown great willingness and energy in carrying out a large amount of additional work in consequence of the depletion of the remaining portion of the permanent staff, and they have been of great assistance in training the temporary staff. I wish to acknowledge their valuable help in enabling the work of the department to be continued satisfactorily.

In addition to the above, one of my permanent male staff has been discharged from the army on account of illness during 1917, and has resumed his civil duties.



During March, 1916, the Second Army Central Force, whose sanitary officer I was, and the headquarters of which were situated at Tunbridge Wells, ceased to exist as such, and the Southern Army (Home Defence) was formed. I was appointed the sanitary officer to the Southern Army. Then there was a re-arrangement of troops, and the headquarters of the Southern Army removed to Brentwood in Essex. This re-arrangement of the troops led to the severing of my connection with the Southern Army, as had I left Kent the County Council would have been without medical supervision of the public health administration of the county. Therefore I became demobilised as and from March 29th, 1916, with the approval of the War Office. I have received written appreciation of my work from my late superior officer, Colonel Sloggett, who is now the Assistant Director of Medical Services to the Southern Army (Home Defence).

Of the thirty-five district medical officers of health in Kent, eleven have vacated their positions temporarily for the war. Two others are engaged in military work in addition to their civil work, with commissions, and five who so engaged for a period have now discontinued their army duties. The remainder have all co-operated most willingly with the military authorities in public health work. For the most part the health of the troops stationed in Kent has been very good indeed.

The need for economy has been impressed upon everyone. The attention of local authorities has been drawn to the fact that economies and restrictions on borrowing are possible not only as regards new works, but also as regards works in progress. The Local Government Board has recommended that the inception of new works, except such as are of pressing necessity, either for reasons of public health or on account of war requirements, should be avoided. As facilities have been given to employees for joining the army or finding employment in those occupations which are of paramount importance during the present war, and as substitutes have been needed in consequence, great care has been taken to engage either women or only men not eligible for the army in the Public Health Department of this county. The Local Government Board has also suggested that whilst not unduly relaxing the standard of public health administration in their area, local authorities should, as far as possible, refrain from requiring the execution of work, the cost of which has to be borne by private individuals, unless the work is urgently necessary for the removal of nuisances or for the protection of health.

The following extracts from the reports of the district medical officers of health relate to the billeting of troops or conditions caused by the war :—

*Beckenham.*—A large number of troops were stationed in this district. The acting medical officer of health states that there has been a want

of co-operation with the public health department on the part of the military authorities.

*Broadstairs and St. Peter's.*—A number of troops was billeted in the town and every assistance possible was given to the military authorities. Billets were inspected from time to time as to their sanitary condition. Notifications of infectious diseases were communicated to the military authorities, so that any precautions necessary might be taken to prevent the men being involved. The disinfecting station was used freely, and any soldiers sent by the regimental medical officer suffering from skin trouble were treated by special baths.

*Chatham* —The medical officer of health recommends that no houses should be occupied as billets unless sanctioned by himself, that regard should be had to the size of the family, and that the regulations as to cubic space should be strictly observed.

In all cases where contracts for the supply of foods to soldiers have been entered into, the names and addresses of the contractors have been received, the premises are visited, and every endeavour is made to secure satisfactory hygienic conditions and a proper standard of cleanliness. Visits are also paid to the kitchens of restaurants and eating houses, and this practice, which tends to secure a better standard of cleanliness, has in some cases been found very necessary in the interests of the public health.

*Cheriton.*—No troops were billeted in this district during the year, but a certain number of wives and families of Canadian troops came to live there, and this caused considerable overcrowding.

A Medical Inspector of Food from the Local Government Board, with the medical officer of health and inspector of nuisances, inspected the butchers' shops where sausages and liver were supplied to the army canteens at Shorncliffe. Defects were found in each of the premises visited, but in every case they were promptly remedied. An inspection of green-grocers' shops supplying camps was also carried out. No defects were found.

*Chislehurst.*—Very few troops were billeted in this district during 1916. The provision of a new hospital is under consideration for the surgical treatment of the wounded.

*Deal.*—With a view to assisting the military authorities the council have, during the year, undertaken the fumigation and stoving of clothing,



bedding and other articles in cases where soldiers have suffered from infectious diseases, vermin, etc. Arrangements have also been made at the council's dépôt whereby personal fumigation can be carried out in necessary cases. Special inspection of billets and houses entirely occupied by soldiers are carried out from time to time.

Arrangements have been made with reference to houses used as soldiers' billets whereby there is a daily collection of refuse. The council place refuse carts at the disposal of the military authorities, who themselves undertake the removal four days a week and the town scavengers do it the remaining days. This arrangement was necessary owing to the fact that considerable numbers of men occupy these houses and consequently constant and regular removal must be done. The arrangement works well.

*Dover.*—About 670 men were billeted here during part of the year. The billets were visited by the sanitary authority in order to prevent overcrowding and to ensure sanitary conditions.

*Faversham Borough.*—During the year the same quarters have been occupied by the local troops as before; a few of the men have occupied billets in private houses. All matters in connection with their housing and feeding and sanitary arrangements have been inspected regularly, and on the whole have been kept in good order. A small amount of food was condemned as unfit for consumption.

The amount of infectious disease among the men stationed in the borough was very small. The V.A.D. hospital at "The Mount," has received most of the cases of serious illness and accident (373 admissions) among the troops stationed in the borough and the surrounding district. Other cases have been admitted to the military hospital at Lees Court.

Two hundred and sixty-five inspections were made by the inspector of the buildings used as barracks and messrooms.

In February Dr. Fletcher, of the Local Government Board, made an inspection, on behalf of the War Office, of the premises of tradesmen supplying food to the troops. The buildings generally have been kept in a satisfactory manner, and any matters brought to the notice of the officers received prompt attention. About 56 lbs. of bacon was condemned during the year, and destroyed as unfit for food.

*Folkestone.*—An improvement was noted with respect to the billeting of troops.



*Gillingham.*—A close watch was kept on houses where troops were billeted.

*Herne Bay.*—The troops billeted averaged about 3,000, but they were housed mainly in 280 empty houses. Billets were kept under observation.

*Margate.*—At the request of the Local Government Board, the premises of all contractors supplying food stuffs to the troops were inspected in order to see that it was prepared under satisfactory conditions. The medical officer of health also supplied a list of outside firms from whom food was obtained by the local contractors in order that the officers of the Local Government Board might inspect the food and premises of these firms.

A large amount of work in connection with the above matters has been put upon the department, which often necessitated Sunday work and overtime.

*Milton Regis, Sheerness, Sittingbourne, and Queenborough.*—Every assistance has been rendered the military authorities, so far as billeting is concerned, and also in the supervision of food contracts.

*Penge Urban.*—A large number of soldiers were billeted in empty houses, but no notice of this was sent to the medical officer of health. The Deputy Director of Medical Services was communicated with respecting the want of co-operation between the civil and military authorities, and he replied to the effect that the police were the authorities to give notice as to where the troops were billeted. As the police were not notified, they were of course unable to do so. Dr. Wilkinson found his offers of help to the local military authorities not particularly welcome.

*Ramsgate.*—Between three and four thousand troops were billeted in empty houses during the winter, and about half that number during the summer. Every facility was given regarding the health of the troops. Disinfectants were supplied. The disinfecting station was used freely for stoving blankets, kits, etc., infected with vermin, scabies and infectious diseases. Billets were visited. Every week lists of infected houses to be placed out-of-bounds were sent to local units and hospitals. Accommodation was provided whereby soldiers with scabies and vermin could have a bath at the same time as their clothes were being stoved.

*Rochester.*—A large number of troops has been resident or billeted in the district during the winter months. On the whole the arrangement has worked satisfactorily, but occasionally difficulties have arisen with

regard to overcrowding in billets and with regard to the disposal of household refuse and latrine contents from military establishments. This disposal is almost wholly in the hands of private contractors, who display a great deal of carelessness in providing for the ultimate destination of their collections.

*Sandwich.*—In the winter months some overcrowding took place, in consequence of additional soldiers being stationed in the town.

*Walmer Urban.*—About seven hundred soldiers were billeted in the district during the early part of 1916 and again at the fall of the year. No notice was given to the medical officer of health, and the billeting arrangements were completed without any assistance from the sanitary department. The only work undertaken on behalf of the council was in connection with water supply, and the removal of house refuse. Apparently there were no cases of infectious disease among the men during the year.

There are two temporary war hospitals, one British Red Cross, and one Canadian, having a total accommodation for about 250 men. Assistance has been rendered to the Red Cross Hospital on several occasions during the year.

*Whitstable Urban.*—About 700 troops were billeted in houses during the winter, and were in camp during the summer. Also a primary first line hospital for two hundred wounded and a convalescent home for thirty-five soldiers were established.

*Ashford, East, Rural.*—Large numbers of troops were billeted in the district during the year, especially in the parishes of Willesborough, Kennington, Wye, Boughton, Eastwell and Marsham, calling for frequent inspection and supervision. Additional scavenging was also necessary.

*Ashford, West, Rural.*—Considerable time was spent in inspecting houses where troops were billeted. 2,026 articles were disinfected by the council for the military authorities.

*Bridge Rural.*—Scavengers have worked better during 1916 in removing excreta, etc., from soldiers' billets, and contracts have nearly doubled.

*Bromley Rural.*—Troops have been billeted at Mottingham, St. Mary Cray and St. Paul's Cray, Knockholt, Farnborough and Hayes. The commanding officer was notified in cases of infectious disease in the locality of billets, and observations were made on water courses and accommodations near camp.

*Eastry Rural.*—Billets have been kept under observation, and every assistance rendered in connection with infectious diseases.

*Faversham Rural.*—The average number of troops in the area during the year has been about four hundred. The health of the troops has been good, and only one case of notifiable disease has occurred amongst them. The sanitary arrangements have been inspected from time to time.

*Malling Rural.*—A great deal of useful work was again undertaken for the army. Much disinfection especially was done, and the high pressure steam disinfectors have been in great request.

No intimation of proposed billeting is given to the medical officer of health, and he is consequently unable to advise as to the suitability of the locality or as to the existence of infectious or contagious disease in the immediate neighbourhood, with results which have proved trying to both civil and military authorities.

*Milton Rural.*—Every assistance has been rendered the military authorities so far as billeting is concerned, and also in the supervision of food contracts.

*Sevenoaks Rural.*—Camps were constructed during 1916 at Shoreham, Sundridge, Seal and Bessels Green. In addition, soldiers were billeted at Westerham, Sundridge and Brasted.

*Sheppey Rural.*—The troops in this district have all been stationed in huts. The health of troops has been particularly good, and sanitation, on the whole, satisfactory.

*Strood Rural.*—Troops were billeted at Frindsbury and Cliffe, and there are military camps at Higham and Shorne.

*Thanet Rural.*—A large number of inspections was made of billets, and disinfection work was carried out for the troops. All possible assistance was rendered to the military authorities in connection with infectious disease, etc.

In the other districts where troops have been stationed, all possible assistance has been rendered by the medical officer of health and the sanitary staff, causing much extra work.



## ADOPTIVE ACTS, BYE-LAWS AND REGULATIONS.

The appended summaries on pages 94d and 94e show the various adoptive Acts, Bye-Laws and Regulations which are in force in each of the urban and rural districts of the County of Kent.

New Bye-Laws are stated by the medical officers of health to be needed in the following districts :—

*Dover*.—As regards houses let in lodgings.

*Faversham*.—As regards houses let in lodgings. (These are being obtained at the time of writing.)

*Margate*.—As regards offensive trades. (To be adopted after the end of the war.)

*New Romney*.—As regards control of foreshore.

*Walmer*.—As regards provision of covered sanitary dust-bins. These have been applied for but abandoned owing to present restrictions imposed by the Local Government Board.

*Hollingbourn Rural*.—As regards slaughter-houses and refuse collection in the larger villages.







TABLE 20.—SHOWING CAUSES OF DEATH IN THE **URBAN DISTRICTS** OF THE COUNTY OF KENT  
DURING THE YEAR 1916 (EXCLUDING NAVAL AND MILITARY DEATHS).

District.	Enteric Fever.	Small-pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Pulmonary Tuberculosis.	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, Malignant Disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia (all forms).	Other Respiratory Diseases.	Diarrhoea, &c. (Under 2 years).	Appendicitis and Typhilitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Parturition, apart from Puerperal Fever.	Congenital Debility, &c.	Violence, apart from Suicide.	Suicide.	Other defined Diseases.	Causes ill-defined or unknown.	Special Causes (included above). Cerebro-Spinal Fever.	Polionyelitis.
Ashford ...	...	...	1	...	3	1	5	1	18	2	3	21	...	1	21	16	5	2	3	...	2	...	7	...	...	11	5	1	71	1	...	...
Beckenham .	...	...	...	...	3	...	11	...	28	3	5	26	...	4	42	30	16	2	3	2	3	...	18	1	1	14	9	2	104	...	1	...
Bexley ...	...	...	4	2	1	2	1	...	17	2	1	20	2	3	35	25	18	3	11	4	4	...	8	...	2	15	5	2	82	1	1	...
Broadstairs and St. Peter's ...	...	...	...	...	...	2	...	...	9	...	3	13	...	...	11	5	3	1	1	...	...	...	4	...	1	2	4	1	31	...	...	...
Bromley (Borough)...	...	...	...	...	8	1	10	1	41	3	...	37	1	4	53	20	17	3	7	3	3	...	12	2	...	25	6	2	113	...	1	...
Chatham (Borough)...	3	...	16	2	2	4	6	...	40	4	8	53	5	13	75	54	30	4	14	3	4	...	9	...	2	40	15	6	150	10	11	...
Cheriton ...	...	...	...	...	1	...	...	1	6	1	3	6	...	...	8	7	2	2	2	...	...	...	...	1	...	4	5	...	18	...	...	...
Chislehurst ...	...	...	1	...	3	...	2	...	8	1	1	9	1	1	9	5	4	3	...	...	...	...	5	1	1	4	3	1	31	...	...	...
Dartford ...	1	...	5	...	8	3	2	...	23	1	...	25	...	...	30	21	13	5	7	1	2	...	2	1	1	16	8	...	67	...	...	1
Deal (Borough) ...	...	...	1	...	...	...	1	...	9	2	2	19	1	1	7	7	18	...	4	...	1	...	3	...	...	8	6	...	55	3	...	...
Dover (Borough) ...	1	...	1	1	13	6	18	1	38	9	9	56	4	2	48	48	28	5	9	1	6	...	12	3	1	30	81	1	179	4	...	...
Erith ...	...	...	1	11	6	16	8	1	26	8	3	26	1	6	44	33	29	5	4	2	6	...	12	...	3	23	15	1	90	1	2	...
Faversham (Borough)	2	...	...	...	...	1	7	1	15	1	2	16	1	1	17	12	7	7	1	3	2	1	6	...	1	18	30	...	46	1	1	...
Folkestone (Borough)	...	...	1	4	5	3	3	1	30	6	4	53	2	6	58	48	17	9	16	1	7	...	15	5	5	23	14	2	130	2	1	1
Footscray ...	...	...	1	...	1	...	2	...	10	3	1	9	1	...	11	8	7	3	...	...	1	...	2	1	1	3	...	2	32	...	...	...
Gillingham (Borough)	2	...	3	...	7	3	1	...	60	5	7	53	...	16	73	54	21	10	3	4	4	...	11	2	2	45	14	6	179	6	8	...
Gravesend (Borough)	...	...	6	...	3	11	14	1	35	2	7	32	1	2	49	31	37	3	14	2	8	1	11	...	2	20	21	4	128	2	1	...
Herne Bay ...	...	...	...	...	2	1	1	...	3	1	...	8	...	1	22	7	...	1	1	3	2	1	1	...	1	10	2	1	31	...	1	...
Hythe (Borough) ...	...	...	1	...	...	1	4	...	8	...	...	6	...	2	10	10	1	1	...	...	1	...	1	1	1	2	3	1	37	...	...	...
Lydd (Borough) ...	1	...	...	...	...	...	...	...	2	...	...	3	...	1	1	2	1	...	1	...	1	...	...	...	...	1	1	...	8	...	...	...
Maidstone (Borough)	8	...	...	...	5	...	6	1	46	7	4	48	3	3	64	41	27	7	11	...	9	...	17	2	3	19	19	5	158	12	1	1
Margate (Borough)...	1	...	5	...	2	1	5	...	33	3	6	36	1	2	38	24	15	2	3	...	3	...	9	1	1	11	12	2	95	3	...	...
Milton Regis ...	...	...	...	...	1	3	11	1	8	3	1	5	...	...	12	4	3	4	1	3	2	...	1	...	1	3	6	2	36	...	...	...
New Romney (Borough)...	...	...	...	...	...	2	...	...	1	...	...	1	...	1	1	2	1	...	1	...	...	...	...	1	...	2	...	1	3	1	1	...
Northfleet ...	3	...	2	1	3	3	4	...	18	1	5	14	2	...	23	10	21	1	10	3	1	...	6	...	4	7	12	1	41	2	...	...
Penge ...	...	...	...	...	...	2	17	...	24	2	3	26	1	5	52	22	22	3	1	...	2	...	12	1	...	8	3	1	98	1	2	1
Queenborough (Borough)	...	...	...	...	2	4	...	...	2	...	1	1	...	...	2	1	2	...	1	1	...	...	...	...	...	4	3	...	7	...	...	...
Ramsgate (Borough)	3	...	...	...	...	2	8	...	34	4	9	36	...	...	49	27	13	5	2	4	4	...	9	...	1	27	32	2	143	4	...	...
Rochester (City) ...	2	...	...	...	6	6	11	1	31	5	4	40	...	5	48	27	24	7	12	4	2	...	10	1	3	22	7	2	130	1	1	...
Sandgate ...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	3	2	...	...	...	...	1	...	1	...	...	...	1	...	5	...	...	...
Sandwich (Borough)	...	...	...	...	...	...	2	...	4	2	1	2	...	...	5	4	3	1	1	...	...	...	4	...	...	1	2	...	17	3	...	...
Sevenoaks ...	...	...	...	...	1	...	5	...	13	3	3	14	...	...	12	5	2	...	2	...	1	...	4	...	1	2	2	...	38	1	...	...
Sheerness ...	3	...	1	1	5	10	4	2	11	2	2	15	1	3	25	7	15	5	1	1	4	...	3	2	1	20	5	2	78	2	3	...
Sittingbourne ...	...	...	...	...	2	4	5	...	12	...	...	7	...	1	14	6	7	2	1	...	...	...	4	...	...	7	3	1	36	...	1	...
Southborough ...	...	...	...	...	1	1	2	...	8	3	...	8	...	...	13	5	4	1	...	1	1	...	2	...	...	4	4	...	43	1	...	...
Tenterden (Borough)	...	...	...	...	...	2	...	...	5	2	2	2	...	1	5	...	2	...	...	...	1	...	...	...	...	2	...	...	18	...	...	...
Tonbridge ...	1	...	...	...	1	2	2	...	18	3	4	14	1	4	25	16	12	5	...	1	...	...	4	...	...	8	8	2	53	1	...	1
Tunbridge Wells (Borough)...	...	...	1	...	5	7	28	...	27	5	7	64	...	3	70	24	27	9	3	4	3	...	9	2	3	16	12	4	159	...	...	...
Walmer ...	...	...	...	...	1	...	2	...	3	1	...	7	1	...	5	4	3	1	1	...	1	...	3	...	...	1	2	...	20	...	...	...
Whitstable ...	...	...	...	...	6	3	2	...	12	1	4	17	...	1	19	4	4	...	...	...	...	...	3	...	...	3	...	1	51	...	1	...
Wrotham ...	...	...	...	...	...	...	3	...	4	...	...	2	...	1	8	4	3	1	...	1	...	...	...	...	...	1	...	1	18	2	...	...
Total Urban ...	31	...	51	22	107	105	215	13	741	101	115	851	30	94	1117	682	484	123	152	52	92	3	240	28	43	482	380	60	2829	65	38	5



TABLE 21. SHOWING CAUSES OF DEATH IN THE **RURAL DISTRICTS** OF THE COUNTY OF KENT  
DURING THE YEAR 1916 (EXCLUDING NAVAL AND MILITARY DEATHS).

District.	Enteric Fever	Small-pox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Erysipelas	Pulmonary Tuberculosis	Tuberculous Meningitis	Other Tuberculous Diseases	Cancer, Malignant Disease	Rheumatic Fever	Meningitis	Organic Heart Disease	Bronchitis	Pneumonia (all forms)	Other Respiratory Diseases	Diarrhoea, &c. (Under 2 years)	Appendicitis and Typhlitis	Cirrhosis of Liver.	Alcoholism	Nephritis and Bright's Disease	Puerperal Fever	Parturition, apart from Puerperal Fever	Congenital Debility, &c.	Violence, apart from Suicide.	Suicide	Other defined Diseases	Causes ill-defined or unknown	Special Causes (included above) Cerebro-Spinal Fever	Poliomyelitis.
Ashford, East ...	...	...	1	...	4	...	5	1	11	1	2	18	1	2	32	10	7	...	3	...	...	...	3	1	2	11	7	1	66	2	...	...
Ashford, West...	...	...	...	...	1	1	1	...	10	2	1	9	...	1	9	6	3	3	...	...	...	...	2	...	...	2	4	1	41	1	...	...
Blean ...	1	...	...	...	1	2	6	...	12	...	1	11	...	...	16	3	4	2	...	1	1	...	4	...	...	3	2	3	37	...	...	...
Bridge ...	...	...	...	...	1	2	7	1	8	2	...	13	...	3	23	6	3	2	5	...	...	...	5	...	...	4	3	1	37	1	...	...
Bromley ...	...	...	2	...	2	...	6	1	26	2	5	28	...	3	42	27	19	4	4	3	2	1	7	...	1	19	10	1	76	1	...	...
Cranbrook ...	...	...	...	...	2	2	4	...	10	...	3	14	...	...	33	9	7	...	1	...	1	...	3	...	2	4	3	1	49	...	...	1
Dartford ...	1	...	5	1	11	5	11	...	54	5	8	50	2	4	53	33	27	3	18	3	3	...	12	...	5	28	17	10	126	2	2	...
Dover ...	...	...	...	...	...	1	3	...	4	2	1	5	...	1	6	8	3	2	3	1	...	...	3	...	1	7	6	1	19	1	...	...
Eastry ...	1	...	...	...	...	1	3	...	6	3	2	19	1	...	33	9	5	3	3	1	1	...	4	...	1	9	2	...	46	1	...	...
Elham ...	...	...	...	...	...	...	3	...	5	...	2	10	...	...	15	8	10	1	2	1	...	...	...	...	...	3	4	...	37	2	...	...
Faversham ...	...	...	...	...	2	...	...	1	12	...	1	13	1	1	31	9	17	4	...	2	...	...	2	...	1	11	65	2	77	...	...	...
Hollingbourn ...	...	...	1	...	...	1	4	...	9	3	1	12	1	2	27	14	3	4	3	1	2	...	1	2	...	6	5	2	55	3	...	...
Hoo ...	...	...	...	...	...	...	2	...	2	...	1	5	...	...	7	4	4	1	1	...	1	...	...	...	...	2	4	...	21	1	...	...
Maidstone ...	...	...	...	...	3	3	7	...	20	2	3	15	1	...	34	20	5	3	2	3	...	1	1	...	...	3	5	2	78	...	...	...
Malling...	...	...	8	2	4	3	7	1	23	2	4	36	2	...	33	27	13	4	9	4	3	...	11	1	1	13	5	1	89	7	...	...
Milton ...	1	...	...	...	4	1	4	...	4	1	2	8	...	1	13	10	15	3	2	1	1	...	14	1	...	9	7	...	50	2	1	...
Romney Marsh ...	...	...	...	...	...	...	...	...	5	1	...	1	...	...	1	2	...	...	1	...	1	...	...	...	...	2	4	...	12	...	...	1
Sevenoaks ...	...	...	...	...	4	1	7	...	28	4	2	27	...	...	36	15	14	5	2	...	...	...	5	...	...	10	13	2	86	5	...	...
Sheppey ...	...	...	...	...	1	1	...	...	2	...	1	2	...	...	3	3	2	...	...	...	...	...	1	...	...	4	3	...	20	...	...	...
Strood ...	...	...	3	...	2	3	5	...	15	1	3	17	1	1	11	18	11	1	2	1	1	...	4	1	2	16	8	1	60	3	...	...
Tenterden ...	...	...	...	...	...	...	3	1	8	...	...	5	...	...	12	7	4	1	...	1	1	...	1	...	2	2	2	1	28	...	...	...
Thanet ...	...	...	5	...	1	1	2	...	8	1	4	17	1	...	19	4	2	7	1	1	1	...	5	...	1	5	7	2	45	1	...	...
Tonbridge ...	...	...	...	...	...	1	3	...	11	1	1	22	...	2	26	15	10	3	1	2	...	...	4	...	2	6	4	1	68	4	...	1
Total in Rural Districts ...	4	...	25	3	43	29	93	6	293	33	48	357	11	21	515	272	188	56	63	26	19	2	92	6	21	179	190	33	1223	37	3	3
Total in Urban Districts ..	31	...	51	22	107	105	215	13	741	101	115	851	30	94	1117	682	484	123	152	52	92	3	240	28	43	482	380	60	2829	65	38	5
Total for County ...	35	...	76	25	150	134	308	19	1034	134	163	1208	41	115	1632	954	672	179	215	78	111	5	332	34	64	661	570	93	4052	102	41	8





TABLE 22.—Showing Ages at Death in the **Aggregate Urban** and the **Aggregate Rural Districts** in the County of Kent during the Year 1916 (excluding Naval and Military Deaths).

Age.	Sex.	Enteric Fever.	Small Pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Pulmonary Tuberculosis.	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer—Malignant Disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia (all forms).	Other Respiratory Diseases	Diarrhoea &c.	Appendicitis and Typhlitis.	Cirrhosis of Liver	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Parturition apart from Puerperal Fever.	Congenital Debility, &c.	Violence apart from Suicide.	Suicide.	Other Defined Diseases.	Causes ill-defined or unknown.	
Aggregate Urban Districts.																																
Under 1 year .....	M.	..	..	8	..	14	2	1	1	2	12	7	..	..	13	..	50	47	2	82	..	..	..	..	..	..	255	14	..	116	3	
	F.	..	..	6	2	31	1	3	1	3	10	..	..	..	7	..	32	42	4	47	..	..	..	1	..	..	215	6	..	82	5	
1 year and under 2 years .....	M.	..	..	12	..	14	5	1	..	1	3	..	..	..	4	..	11	25	..	13	..	..	..	..	..	..	1	6	..	24	..	
	F.	..	..	6	2	23	2	1	..	4	9	2	..	..	3	..	7	27	..	10	..	..	..	1	..	..	2	1	..	9	4	
2 years and under 5 years .....	M.	..	..	8	4	5	23	1	..	3	14	2	1	1	6	..	5	24	1	6	..	..	..	..	..	..	2	3	..	20	..	
	F.	1	..	8	3	12	15	1	1	3	10	11	..	1	5	3	7	18	2	5	2	..	..	..	1	..	..	2	6	..	10	2
5 years and under 15 years .....	M.	2	..	1	5	3	33	1	..	7	16	17	2	3	17	6	4	10	3	1	9	..	..	..	5	..	..	..	26	..	31	1
	F.	2	..	2	5	3	22	1	..	16	18	6	1	2	17	9	2	11	1	1	6	..	..	..	1	..	..	3	6	..	16	..
15 years and under 25 years.....	M.	..	..	..	..	..	..	1	..	51	3	11	1	2	6	13	3	10	3	..	4	..	..	2	..	..	..	29	2	26	..	
	F.	4	..	..	..	1	..	2	..	78	5	15	2	5	5	15	1	6	1	1	5	..	..	3	10	8	1	12	3	22	..	
25 years and under 45 years.. .....	M.	9	..	..	..	..	..	6	2	173	1	15	19	..	2	45	9	32	13	2	7	9	2	11	..	..	1	95	16	86	1	
	F.	6	..	..	..	..	1	13	1	175	..	12	47	6	2	60	9	25	5	12	6	7	..	23	18	35	..	18	7	108	5	
45 years and under 65 years.....	M.	4	..	..	..	..	1	39	..	112	..	4	160	5	4	151	56	62	18	6	2	31	..	47	..	..	..	72	12	232	12	
	F.	2	..	..	1	..	..	23	..	73	..	7	198	3	3	167	42	37	10	5	9	24	1	38	..	..	..	18	7	249	15	
65 years and over .....	M.	1	..	..	..	1	..	41	3	15	..	4	184	1	..	296	176	53	32	14	2	9	..	64	..	..	..	26	13	759	6	
	F.	..	..	..	..	..	..	80	4	25	..	2	236	1	..	352	268	55	28	12	..	12	..	43	..	..	..	37	..	924	11	
All ages—Urban .....	M.	16	..	29	9	37	64	91	6	364	49	60	367	12	52	511	314	263	72	124	24	49	2	129	..	259	276	43	1344	23		
	F.	15	..	22	13	70	41	124	7	377	52	55	484	18	42	606	368	221	51	93	28	43	1	111	28	43	223	104	17	1420	42	
Aggregate Rural Districts.																																
Under 1 year .....	M.	..	..	2	..	10	..	1	..	1	3	..	..	..	2	..	19	18	1	40	..	..	..	2	..	..	98	5	..	45	1	
	F.	..	..	1	..	16	..	..	..	..	2	3	..	..	2	1	17	10	1	16	..	..	..	..	..	..	74	2	..	26	..	
1 year and under 2 years.. .....	M.	..	..	8	1	4	1	..	..	3	3	1	..	..	1	..	2	12	..	3	..	..	..	..	..	..	..	3	..	6	..	
	F.	..	..	4	..	6	..	1	..	3	2	..	..	..	..	..	4	6	..	4	..	..	..	..	..	..	..	3	..	9	..	
2 years and under 5 years .....	M.	..	..	2	..	1	8	2	..	2	6	2	1	..	..	..	3	7	..	2	..	..	..	..	..	..	..	2	..	1	..	
	F.	..	..	2	..	6	6	..	..	12	3	3	..	..	5	..	1	7	1	2	1	..	..	1	..	..	3	8	..	2	..	
5 years and under 15 years .....	M.	..	..	3	..	..	5	1	..	10	6	5	..	1	2	5	..	9	2	..	8	1	..	..	..	..	3	14	..	10	1	
	F.	..	..	3	..	..	6	..	..	14	5	7	..	..	3	3	1	1	2	5	3	..	..	1	..	..	1	2	..	15	..	
15 years and under 25 years .....	M.	..	..	..	1	..	..	2	..	30	2	..	1	..	..	6	1	3	..	..	2	3	..	..	1	..	..	22	..	9	..	
	F.	..	..	..	..	..	1	1	..	27	..	1	1	3	1	3	..	3	..	2	3	..	..	1	1	3	..	7	..	11	3	
25 years and under 45 years .....	M.	1	..	..	1	..	..	6	..	61	1	4	7	1	3	11	1	14	3	1	3	1	1	5	..	..	..	48	4	38	4	
	F.	2	..	..	..	..	..	4	..	67	..	7	17	5	1	16	2	7	6	4	3	1	..	5	5	17	..	5	5	46	..	
45 years and under 65 years .....	M.	..	..	..	..	..	..	11	2	46	..	2	63	1	..	63	11	33	8	3	1	4	..	11	..	..	..	33	9	108	13	
	F.	1	..	..	..	..	2	11	..	20	..	5	80	..	1	70	6	11	5	2	..	1	..	10	..	1	..	5	4	90	5	
65 years and over .....	M.	..	..	..	..	..	..	28	2	8	..	4	96	..	..	167	99	16	19	5	1	8	1	35	..	..	..	22	10	411	5	
	F.	..	..	..	..	..	..	25	2	4	..	4	91	..	..	170	105	31	8	8	1	3	..	20	..	..	..	9	1	362	5	
All ages—Rural .....	M.	1	..	15	1	15	14	51	4	156	21	18	168	3	8	252	136	112	33	54	15	14	2	54	..	..	101	149	23	628	24	
	F.	3	..	10	2	28	15	42	2	137	12	30	189	8	13	263	136	76	23	43	11	5	..	38	6	21	78	41	10	561	13	





TABLE 23. Information respecting the various Adoptive Acts, Bye-Laws and Regulations which are in Force in the URBAN DISTRICTS of the County of Kent.

DISTRICT.	Common Lodging Houses (P.H. Act, 1875, S. 80).	Houses let in Lodgings (P.H. Act, 1875, S. 90).	Cleansing, &c., and Removal of Refuse (P.H. Act, 1875, S. 44).	Tents, Vans, Sheds, &c. (H.W.C. Act, 1885, S. 9 (2)).	Public Mortuaries (P.H. Act, 1875, S. 141.)	Hop-Pickers and Fruit Pickers (P.H. Act, 1875, S. 314, and P.H. (Fruit Pickers Lodgings) Act, 1882).	Slaughter-houses (P.H. Act, 1875, S. 169).	Prevention of Nuisances (P.H. Act, 1875, S. 44).	Keeping of Animals (P.H. Act, 1875, S. 44).	Offensive Trades (P.H. Act, 1875, S. 113).	New Streets and Buildings (P.H. Act, 1875, S. 157, and P.H.A.A. Act, 1890, S. 23).	Removal of Offensive Matters and House Refuse (P.H.A.A. Act, 1890, S. 26).	Public Conveniences (P.H.A.A. Act, 1890, S. 20).	Public Baths and Washhouses (B. & W. Act, 1846, S. 34).	Regulations under Dairies Cowsheds and Milkshops Order, 1885.	Infectious Disease (Prevention) Act, 1890.	Public Health Acts Amendment Act, 1890.	Public Health Acts Amendment Act, 1907.
Ashford ... ..	Yes	Yes	Yes	.....	.....	.....	Yes	Yes	Yes	Yes (fish-frying)	Yes	Yes	.....	Yes	Yes	Yes	Yes	Yes (S. 30 & 33)
Beckenham ... ..	.....	Yes	.....	.....	.....	.....	.....	Yes	Yes	.....	Yes	Yes	.....	Yes	Yes	Yes	Yes	Yes
Bexley... ..	Yes	.....	Yes	.....	.....	Yes	Yes	Yes	Yes	.....	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes
Broadstairs and St Peter's... ..	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes	.....	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes†
Bromley (Borough) ... ..	Yes	.....	Yes (less house-refuse removal)	.....	.....	.....	Yes	Yes	Yes	.....	Yes	Yes	Yes, less as to removal of house refuse	.....	Yes	Yes	Yes	Yes†
Chatham (Borough) ... ..	Yes	Yes	Yes	Yes	No. Local regulations for management of mortuaries	.....	Yes	Yes	Yes	Yes	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes
Cheriton ... ..	.....	.....	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes	Yes
Chislehurst ... ..	.....	.....	.....	.....	.....	Yes	Yes	.....	Yes	.....	Yes	.....	.....	.....	Yes	Yes	Yes	Yes†
Dartford ... ..	Yes	Yes	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes†
Deal (Borough) ... ..	Yes	.....	.....	.....	.....	.....	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes (Pts. 2, 3, & 5)	Yes (Parts)
Dover (Borough) ... ..	Yes	.....	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes (Parts)
Erith ... ..	.....	.....	Yes	Yes	Yes	.....	Yes	Yes	Yes	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes	Yes†
Faversham (Borough) ... ..	Yes	.....	Yes	.....	.....	.....	Yes	Yes	Yes	.....	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes (Parts)
Folkestone (Borough) ... ..	Yes	.....	.....	.....	.....	.....	Yes	.....	Yes	.....	Yes	.....	Yes	.....	Yes	Yes	Yes	Yes
Footseray ... ..	Yes	.....	.....	.....	Yes	.....	Yes	.....	Yes	.....	Yes	.....	.....	Yes	Yes	Yes	Yes	Yes
Gillingham (Borough) ... ..	.....	.....	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes	Yes	Yes	.....	.....	Yes	Yes	Yes (P. 2 & 3)	Yes†
Gravesend (Borough) ... ..	Yes	.....	The L.A. remove refuse themselves	.....	.....	.....	Yes	Yes	Yes	.....	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes (Parts)
Herne Bay ... ..	Yes	Yes	Yes	.....	.....	.....	Yes	Yes	Yes	.....	Yes	.....	.....	.....	Yes	Yes	Yes	Yes†
Hythe (Borough) ... ..	.....	.....	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	.....	.....	.....	.....	Yes	Yes	Yes†
Lydd (Borough) ... ..	.....	.....	Yes	.....	.....	.....	Yes	.....	.....	.....	Yes	.....	Yes	.....	.....	Yes	Yes	Yes†
Maidstone (Borough) ... ..	Yes	Yes	Yes	Yes	.....	Yes	Yes	Yes	Yes	Yes	Yes	Yes	.....	.....	Yes	Yes	Yes	.....
Margate (Borough) ... ..	Yes	Yes	Yes	Yes	Yes	.....	Yes	Yes	Yes	.....	Yes	Yes	Yes	.....	Yes	Yes	Yes	Yes
Milton Regis... ..	Yes	Yes	Yes	.....	.....	.....	Yes	Yes	Yes	Yes	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes
New Romney (Borough) ... ..	.....	.....	Yes	.....	.....	.....	.....	.....	.....	.....	Yes	Yes	.....	.....	Yes	Yes	Yes (P. 2, 3, 4 & 5)	Yes (Parts)
Northfleet ... ..	.....	.....	Yes	Yes	.....	.....	Yes	Yes	.....	.....	Yes	.....	.....	P. Bs. in the Dist. not property of the Council	Yes	Yes (S. 5)	Yes	Yes†
Penge ... ..	Yes	Yes	Yes	.....	.....	.....	Yes	Yes	Yes	.....	Yes	.....	.....	.....	Yes	Yes	Yes	Yes (Parts)
Queenborough (Borough) ... ..	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes	Yes	Yes	Yes	Yes	.....	.....	Yes	Yes	.....
Ramsgate (Borough) .. ..	Yes	Yes	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes	Yes	.....	.....	.....	Yes	Yes	Yes	Yes
Rochester (City) ... ..	Yes	.....	.....	.....	.....	.....	Yes	.....	.....	Yes	Yes	.....	.....	.....	Yes	Yes	Yes	Yes
Sandgate ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes	Yes
*Sandwich (Borough)... ..	.....	.....	*	.....	.....	.....	*	*	*	.....	Yes	*	.....	.....	Yes	Yes	Yes	Yes (Parts)
Sevenoaks ... ..	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes	.....	Yes	.....	.....	.....	Yes	Yes	Yes (P. 2, 3 & 4)	.....
Sheerness ... ..	Yes	.....	Yes	Yes	.....	.....	Yes	Yes	Yes	.....	Yes	Yes	Yes	Yes	Yes	Yes	Yes (P. 2, 3, 4 & 5)	Yes†
Sittingbourne... ..	Yes	.....	.....	.....	.....	.....	Yes	Yes	.....	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes (P. 3)	Yes
Southborough ... ..	.....	Yes	Yes	Yes	.....	.....	Yes	Yes	Yes	.....	Yes	.....	.....	Yes	Yes	Yes	Yes	Yes (Parts)
Tenterden (Borough) ... ..	.....	.....	.....	.....	.....	.....	Yes	Yes	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes (P. 3)	Yes (P. 2, 3, 4 & 5)
Tonbridge ... ..	Yes	Yes	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes	Yes	Yes	.....	.....	Yes	Yes	Yes	Yes (P. 2, 3 & 4)
Tunbridge Wells (Borough) ... ..	Yes	.....	Yes	.....	Yes	.....	Yes	Yes	Yes	.....	Yes	Yes	.....	.....	Yes	.....	Yes	Yes†
Walmer ... ..	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes	.....	Yes	Yes	.....	.....	Yes	.....	Yes	Yes (Parts)
Whitstable ... ..	Yes	.....	Yes	Yes	.....	.....	Yes	Yes	Yes	.....	Yes	Yes	.....	.....	Yes	Yes	Yes	.....
Wrotham ... ..	.....	.....	Yes	.....	.....	Hop-pickers	Yes	Yes	Yes	.....	Yes	.....	.....	.....	Yes	Yes	Yes	Yes (Parts)

\* In the Borough of Sandwich, Bye-Laws as to Cleansing, &c., and Removal of Refuse, Slaughterhouses, Prevention of Nuisances, Keeping of Animals and Removal of Offensive Matters and House-refuse were made under the Local Government Act, 1858.

† Public Health Acts Amendment Act, 1907.—In the following districts only the sections stated are in force:—

Bexley.—Except sections 50, 61, 66, 78, 79, 80, 81, 82, 83, 84, 85, 86, 92, 93 and 94. Certain of the adopted sections are subject to the provisions of the Order of the Local Government Board, dated April 6th, 1909.

Broadstairs & St. Peter's.—Parts II., III., IV., V. and X. (with the exception of sections 15, 16, 18, 27, 32, 34, 43, 44, 45, 46, 47, 52, 54 and 94).

Cheriton.—Parts II., III., IV. (with the exception of section 67) and V.

Chislehurst.—Parts II., III., IV., V., VII. (Part of Section 81), VIII. and IX.

Dover.—Parts II. and III. Sec. 52 to 67 of Part IV, Part V., Sec. 93 and 95 of Part X.

Footseray.—Parts II., III., IV., V., VI., Sections 81 and 86 of Part VII. Parts VIII., IX. and Section 95 of Part X.

Herne Bay.—Parts II. to X. inclusive.

Hythe.—Sections 15 to 25, 27 to 31 and 33 of Part II.; Sections 34 to 38, 43 to 49, and 51 of Part III.; Sections 52 to 60, and 62 to 65 of Part IV.

Northfleet.—Except Sections 39, 40, 41, 42 and 67.

Sevenoaks.—Parts II., III. and IV., Sections 15 to 17, 20, 21, 23 to 30, 32 to 38, 44 to 53, 55 to 59, 62 to 65 and 67.

Tonbridge.—Parts I. and II.; Sections 34 to 51 inclusive of Parts III., Sections 52 to 67 inclusive of Part IV. and Parts V., VI., IX. and X.





TABLE 24. Information respecting the various Adoptive Acts, Bye-Laws and Regulations which are in force in the **RURAL DISTRICTS** of the County of Kent.

DISTRICT.	Common Lodging Houses (P.H. Act, 1875, S. 80).	Houses let in Lodgings (P.H. Act, 1875, S. 90).	Cleansing, &c., and Removal of Refuse (P.H. Act, 1875, S. 44).	Tents, Vans, Sheds, &c. (H.W.C. Act, 1885, S. 9 (2)).	Public Mortuaries (P.H. Act, 1875, S. 141).	Hop-Pickers and Fruit Pickers (P.H. Act, 1875, S. 314, and P.H. (Fruit Pickers Lodgings) Act, 1882).	Slaughter-houses (P.H. Act, 1875, S. 169).	Prevention of Nuisances (P.H. Act, 1875, S. 44).	Keeping of Animals (P.H. Act, 1875, S. 44).	Offensive Trades (P.H. Act, 1875, S. 113).	New Streets and Buildings (P.H. Act, 1875, S. 157 and P.H.A.A. Act, 1890, S. 23).	Removal of Offensive Matters and House Refuse (P.H.A.A. Act, 1890, S. 26).	Public Conveniences (P.H.A.A. Act, 1890, S. 20).	Public Baths and Wash-houses (B. & W. Act, 1846, S. 34).	Regulations under the Dairies, Cow-sheds and Milkshops Order, 1885.	Infectious Disease (Prevention) Act, 1890.	Public Health Acts Amendment Act, 1890.	Public Health Acts Amendment Act, 1907.
Ashford, East	.....	.....	.....	Yes	... ..	Yes	In 18 contributory places.	.....	.....	.....	In 4 contributory places	.....	.....	.....	Yes	Yes	Yes (P. 2)	Yes†
Ashford, West	.....	.....	.....	Yes	.....	Yes	.....	.....	.....	.....	.....	.....	.....	.....	Yes	.....	.....	.....
Blean ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	.....	.....	.....
Bridge ...	.....	.....	.....	.....	.....	Yes	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes	Yes†
Bromley	Yes	.....	.....	Yes	.....	Yes	Yes	.....	.....	.....	‡ In 10 contributory places & one special drainage district	.....	.....	.....	Yes	Yes	Yes (R.D.S's)	Yes†
Cranbrook	.....	.....	.....	.....	.....	Yes	.....	.....	.....	.....	Yes o	.....	.....	.....	Yes	.....	Yes (P. 3, R.D.S's)	Yes†
Dartford	Yes	Yes	Yes a	Yes	.....	Yes	Yes	Yes	Yes	.....	Yes a b	Yes (in certain parishes)	Yes	.....	Yes	.....	Yes (San. S's)	Yes (San. S's)
Dover	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes	Yes (P. 3 & 4)
Eastry ...	.....	.....	.....	.....	.....	Yes	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes	.....
Elham ...	.....	.....	.....	Yes	.....	.....	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes	.....
*Faversham	.....	.....	Yes	.....	.....	Yes	Yes	Yes	Yes	.....	Yes	.....	.....	.....	Yes	Yes	Yes (P. 3)	Yes†
Hollingbourn...	.....	.....	.....	.....	.....	Yes	.....	.....	.....	.....	Yes, Rural	.....	.....	.....	Yes	Yes	.....	Yes†
Hoo ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	Yes	Yes	.....
Maidstone	.....	.....	.....	Yes	.....	Yes	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes	.....
Malling	.....	.....	.....	Yes	.....	Yes	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes (R.D.S's)	Yes
Milton...	.....	.....	.....	.....	.....	Yes	.....	.....	.....	.....	.....	.....	.....	.....	Yes	Yes	Yes	Yes (S. 50)
Romney Marsh	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes†	.....
Sevenoaks	.....	.....	.....	Yes	.....	Yes	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	.....	Yes (P. 3, R.D.S's)	.....
Sheppey	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes (P. 3)	.....
Strood...	.....	.....	.....	.....	.....	Yes	Yes	.....	.....	Yes c	Yes	.....	.....	.....	Yes	.....	Yes (R.D.S's)	Yes (S. 67 & 86)
Tenterden	.....	.....	.....	Yes	.....	.....	.....	.....	.....	.....	Yes	.....	.....	.....	Yes	.....	.....	.....
Thanet	.....	.....	Yes	Yes	.....	.....	.....	In 8 contributory places	In 8 contributory places	.....	Yes	.....	.....	.....	Yes	Yes	Yes (Parts)	Yes†
Tonbridge	Yes	.....	.....	.....	.....	Yes	Yes, in 4 contributory places	.....	.....	.....	Yes	.....	.....	.....	Yes	Yes	Yes (P. 3, R.D.S's)	.....

\* Urban Powers obtained for the Parishes of Boughton, Lymsted, Ospringe, Teynham, Preston and Faversham (Without only), in 1875. Bye-Laws made in 1879.

‡ In the remaining five contributory places, the rural Code of Bye-Laws with respect to New Buildings, etc., are in force.

o New buildings and certain matters connected with buildings (not streets).

a In force in parishes of Crayford, Stone, Swanscombe, Wilmington, Sutton-at-Hone, Eynsford ; b Special building bye-laws, etc., in force in the parish of Darent

c In parishes of Frindsbury Denton and Strood.

† Public Health Acts Amendment Act, 1907.—In the following districts, only the Sections stated are in force :—

*Ashford, East.*—Part IV. and Sections 34–38 inclusive, 43–47 inclusive, 49 and 50 of Part III.

*Blean.*—Sections 15, 16, 17 and 23 of Part II. Sections 34, 35, 38, 43, 44, 46 and 49 of Part III.

*Bromley.*—Part II., Sections 20 to 24 inclusive, 29 to 33 inclusive ; Part III., Sections 36 to 38 inclusive, 43 to 45 inclusive, 49 and 51 ; Part IV., Sections 52 to 68 inclusive ; for the whole Bromley R.D. ; and Part II., Sections 15 to 18 inclusive, and Section 27. for ten contributory places, and one special drainage district.

*Cranbrook.*—Section 25 of Part II. and Sections 34, 35, 36, 37, 38, 43, 44, 45, 46 and 49 of Part III.

*Elham.*—Sections 23 and 25 of Part II. ; 34 to 46, 48, 49 and 50 of Part III. ; and the whole of Part IV.

*Faversham.*—Part IV. and certain Sections of Part III.

*Romney Marsh.*—Urban powers under Section 23 (3), 25 and 33. (Act of 1890).

*Thanet.*—Section 38. Only in three contributory places.







